

Paul Davis

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Over 25 years experience with computer technology in a variety of capacities including: college IT director, project manager, data analyst, business analyst, database programmer, webmaster, and programmer. Knows the Cornell University information technology environment, campus data marts, reporting tools, budget process, and administrative systems.

Qualifications

Business Analysis / Data Analysis

- Trained and experienced with requirements elicitation methods including interviewing, user observation, document analysis, and survey methods.
- Advocated agile development methods including gathering user stories, identifying smallest viable functionality, early delivery of functional systems, and strong customer and stakeholder interaction.
- Designed and directed mail, telephone, email, and web surveys assessing customer needs and satisfaction on several topics including: large computer systems, computer lab services, conference services, budget priorities, and an economic impact study of alumni.
- Experienced with quantitative statistical data analysis and developing simulation models; Creation and manipulation of large complex data-sets.
- Conducted usability testing interviews and observation to evaluate and modify software.
- Used data reporting tools to provide information to stakeholders to drive strategic decision-making.
- Managed annual reporting data collection for *US News & World Report* and other college surveys, Dean's presentations, and college annual and budget reports.
- Expert at using Excel, Brio, and Tableau to generate reports using campus datamarts and unit datasets.

Project and Program Management

- Managed many complex technical projects and services including, major upgrades, new systems and services, and network migrations.
- Worked with stakeholders to agree upon strategic priorities and manage project inventory, timelines, and resources to meet business needs.
- Well versed in project management techniques, meeting facilitation, group decision-making, project communications, budgeting, negotiation, working with stakeholders, and supervising team members.
- Effectively communicated technical options and implications to stakeholders and decision-makers.
- Managed RFP processes, selected vendors, developed contracts, and oversaw projects.
- Coordinated software decision-making processes and purchases.

Programming

- Co-authored seven commercial educational software applications, including *Oregon Trail for the Mac*.
- Software designer and programmer on research team that developed prototype leading to original Texas Instruments' graphing calculator.
- Experience with numerous programming languages including: Flash, C, Objective C, Object Pascal, SPSS, Perl, FileMaker scripting, AppleScript, Brio, ColdFusion, SQL. Database experience includes: Oracle Database, MS SQL server, FileMaker, Quickbase.

Computer User Support, Training and Teaching

- Conducted user needs assessments to prioritize strategies for software, hardware, facilities, and training.
- Worked with students, staff, faculty, and campus administration to develop user support strategies.
- Spearheaded creation and coordination of special interest groups including Cornell college administrative systems, Cornell CommonSpot developers, and UC Davis NeXT users.
- Developed training courses and taught workshops on numerous software platforms and applications.
- Developed and maintained instructional guides, handbooks, signage, policies, and software support libraries.

Education

- **University of California Davis**, Davis, CA 1993-95 **M.A. Sociology**
Graduate research focused on society and technology and adoption of new technology.
Training in qualitative and quantitative methods of evaluation research and statistical analysis.
- **University of California Davis**, Davis, CA 1989-92 **B.A. Organizational Studies**
- **Cornell University**, Ithaca, New York 1986-1988 25 credits Math and Computer Science
- **State University of New York at Cortland** 1986 13 credits Math and Physics
- **Case Western Reserve University**, Ohio 1980-1982 54 credits Computer Engineering
- **Ramey High School**, Ramey, Puerto Rico 1976-1980
- **Other training:**
ITIL Foundation, Harold D. Craft Leadership Program, Cornell Supervisor Orientation Certificate Program, Project Management Fundamentals, group facilitation, community mediation, and numerous software and technical training courses

Chronological Experience

- 2011-Present** **Team Lead, Applications and Reporting, College of Engineering / Computer and Information Science IT Service Group (COE/CIS ITSG), Cornell University, Ithaca, NY**
Member of the leadership team of the combined College of Engineering and Computer and Information Science IT Service Group (ITSG). Responsible for integration of the applications and reporting staff from both units, which previously had operated independently. Goal of merger was to increase efficiency and reduce expenditures by migrating as many services as possible to centralized services and integrating the remaining services into a new shared ITSG infrastructure.
- Responsibilities included:**
- Project manager of department network and IT infrastructure migration to standardized CIT and ITSG infrastructure resulting in cost savings and improved service to staff and faculty; replaced individual department networks and services and addressed legacy systems. Developed process and procedures and communications templates. Managed communications with departmental staff, faculty, and graduate students.
 - Led vendor selection process and customization for unified IT and facilities ticket system for the newly formed ITSG and facilities service groups.
 - Maintaining COE services during merger such as classroom technology and computer labs.
 - Managed transition of premier 120-seat computer lab to centralized management.
 - Led RFP processes for website migration.
 - Worked with finance staff and central data reporting group to develop standard Quali Financial System reports.
 - Played key role in annual budget process, including building a datamart, developing customized reports and data input forms for all financial staff in both colleges. Managed application to support salary improvement process.
 - Annual reporting for faculty research and publication activity. Redesigned data capture and entry process for Activity Insight to leverage student employees to decrease faculty work load and improve accuracy.
 - Led campus-wide effort to evaluate solutions for submitting purchase requests, functionality that was subsequently added to Quali Financial System with the "I Want" form.
 - Member of campus-wide IT Applications Advisory group, part of the campus IT governance system.

Chronological Experience *continued*

2007-2011 **IT Director, College of Engineering, Cornell University, Ithaca, NY**
Responsibilities included coordinating all aspects of IT service delivery across the college administration offices and 11 largely independent academic departments consisting of about 210 faculty, 2900 undergraduate students, 1700 graduate students, 180 staff members, and 230 non-faculty academic staff.

Ongoing responsibilities included:

- Provided classroom technology for 39 centrally scheduled classrooms.
- Oversaw student computer labs, staff lab manager, and student computer lab employees.
- Communicated IT service changes to college staff and faculty.
- Responsible for IT security including implementation of campus-wide policies and procedures.
- Desktop support for the Engineering administrative offices.
- Contributed toward campus data warehouses and reports.
- Responsible for planning and budgeting for IT services and infrastructure.
- Member of team responsible for generating annual college budget and administering the salary improvement plan. Provided technical support for college-wide budget process.
- Technical support for college websites and provided technical advice to departments.
- Project management for strategic projects and upgrades.
- Developed contracts, RFPs and purchasing for IT services.
- Project management for numerous efforts.
- Supervised staff for centralized IT services.
- Oversaw software license management.
- Member of teams that organized trainings for new administrative systems and software.
- Participated in many cross-college collaborative IT planning, development, and delivery projects; Representative to Cornell IT Management Council.

Special Projects Included:

- Developed strategic plan for college-wide IT.
- Developed Engineering Financial Management System (EFMS) to provide an integrated college budget and forecasting system.
- Strategic replacement of classroom infrastructure and equipment.
- Developed college space inventory system to make it easy to update and track research effort in college facilities.
- Worked campus wide with college officers to specify and develop campus-wide Key Performance Indicator (KPI) system.
- Managed compliance with requirement to remove confidential information from all employee's computers in the college.
- Member of committee that developed college emergency preparedness plan.
- Managed email system upgrade to Outlook for the college.
- Member of campus-wide committee addressing applications as a part of the Reimagining IT at Cornell initiative resulting in IT staff re-organization and the formation of the IT Service Groups.

2001-2007 **Programmer Analyst Sr., Engineering Dean's Office, Cornell University, Ithaca, NY**
Responsible for data management and reporting in the Dean's office, streamlining administrative operations, developing new processes, coordinating implementation of best practices, getting data services to departments, and acting as a liaison between the college and other campus units including CIT, Financial Affairs, and HR.

Reporting:

- Managed annual reporting data collection for *US News & World Report* and other college surveys, Dean's presentations for Engineering College Council, and college budget reports.
- Worked with finance and human resources staff to develop new data collection and reporting tools including "Research Wages" reports, historic staffing reports, and phone directories using Brio.
- Redesigned process and developed tools to streamline collection of course contact hour and research expenditure data to save significant staff time and make data more reliable and useful.

Campus-wide Collaborations:

- Strong advocate for several Cornell campus-wide stakeholder initiatives including: CommonSpot site-license, Filemaker large-scale purchase, HR Online reporting, making uPortal more useful for staff, providing central hosting for web financials, and developing campus-wide web collaboration tools.
- Worked collaboratively to create and coordinate special interest groups (SIG) including the Cornell CommonSpot developers SIG and the College Administrative Systems SIG consisting of college IT directors; member of Cornell Campus Computing Directors (CCD) group.

Chronological Experience *continued*

- Involved with response to and prevention of a variety of computer security incidents. Worked closely with the CIT security office to enhance the “Spider” social security number searching tool to make it more usable.
- Very familiar with Cornell University information technology environment and personnel, campus data marts, reporting tools, budget process, and administrative systems.

Website and Software Development:

- Team member for several web and database integration projects including the online Graduate Application Processing System (GAPS).
- Managed RFP for content management system and vendor selection for college public website.
- Led team that developed internal Dean’s office intranet for use by administrative staff.
- Wrote software for college Salary Improvement Program (SIP) and course data gathering using Filemaker.

Supervision:

- Hired and supervised software programmer who developed pilot space inventory management program, CommonSpot enhancements, and provided user support; supervised grad student employee who developed intranet content.
- Member of team strategizing and overseeing desktop support for college administration; transitioned user support from a single dedicated person to a pooled support service group within the Engineering Library.

Management and Administration:

- Responsible for managing projects, facilitating group decision-making processes, gathering requirements, developing timelines and budgets, negotiating contracts, and working with stakeholders.
- Technical leader for several web development RFPs, selected vendors, developed contracts, and oversaw project implementation for: (1) public website content management system and website design and implementation, (2) college intranet, and (3) online Graduate Application Processing System (GAPS).
- Coordinated software decision-making processes and purchases.

1997-01 Webmaster, Programmer & Technical Support, UC Toxic Substances, Davis, CA

- Responsible for all aspects of computer and technical support for grant-giving agency serving 200 grantees at nine California campuses and three national labs. Responsibilities included: computer purchase, installation, and maintenance of hardware and software, training, webmastering, server administration, and database programming.
- Redesigned office workflow to use direct input of data over the web to streamline grant evaluation and award process, disseminated research results and facilitate communication among researchers.
- Implemented annual conference on-line registration with fully integrating abstract submission, hotel, airline, car rental registration, and conference proceedings; created paperless workflow for conference planning and delivery.
- Using web allowed us to significantly accelerate time frames for awarding grants and disseminating results as well as reduction in personnel by almost one FTE.
- Compiled and disseminated research results from 40 researchers evaluating the fuel oxygenate MTBE’s impacts on the environment. This report directly affected state policy resulting in the phase-out of MTBE; the site received 9,000 page views per day following an exposé on *60 Minutes*. (A significant response in the era before Google.)
- Implemented electronic distribution of newsletters, research directory, and annual reports.
- Developed and promoted the use of Web Forums to facilitate collaboration and communication.
- Conducted email & mail survey of nearly 1000 alumni and faculty; achieved response rate of over 65%.
- Hired and supervised graduate and undergraduate student employees.
- Expert with web and database integration specializing in FileMaker and CDML. Integrated numerous flat file FileMaker databases into relational database with both a graphical user and web interface. Web content development using HTML, Macromedia DreamWeaver, and Adobe GoLive. Redesigned site for improved navigability, usability and appearance. Managed several Macintosh web, mail, database, and file-sharing servers with less than 20 hours total down time in 3 years and as many as 9,000 page views a day.

Chronological Experience *continued*

1996-97 Administrative Analyst, UC Davis Information Technology, UC Davis, Davis, CA

- Directed a large user satisfaction mail survey of over 1,000 staff users of *BANNER*- the UC Davis student information system which includes data on course registration, grades, financial aid, and accounting. Responsible for project design, administration, and management; database management, statistical analysis, report preparation; supervised student employees.
- Worked with large stakeholder team to evaluate existing software features and proposed software upgrades. Resulted in numerous improvements in support services and increased user satisfaction.
- Assisted with several other projects including computer lab user survey to evaluate customer satisfaction of campus computing services.

1994-96 Member of the UC Davis IT Administrative Advisory Committee, UC Davis, Davis, CA

Participated in group decision-making process charting the future of campus information technology services. Wrote modem-bank allocation plan to guide new campus policies.

1993-95 Network Administration, Sociology Dept., UC Davis, Davis, CA (unpaid student position)

Established and managed a computer lab and departmental network made up of PCs and Macs. Supervised and hired departmental technical support staff. Taught training courses and seminars on e-mail, internet access, statistical software, and bibliographic software. Purchased equipment. Designed and physically setup lab network connections and hub. Maintained hardware and software. Provided support in-person, and via e-mail, telephone, and computer lab logs.

1991-95 Researcher, Sociology, Behavioral Sciences, & Graduate School of Mgmt, UC Davis, Davis, CA

- Worked on five different research projects focused on linking economic and organizational analysis to technological development.
- Projects included: socio-technical workplace design (a form of technical team organization), standardization of computer and office equipment, how employees decide on computer equipment purchases, informal finance organizations and rotating savings and credit associations, and savings and wealth patterns.
- Technical work included: quantitative statistical data analysis using SPSS, developing economic simulation models using Lotus Improv, creation and manipulation of large complex data-sets including census data, development of annotated bibliographic databases, and historical and comparative qualitative methods.
- Imported, cleaned, manipulated, and analyzed large data-sets; created data dictionaries and code-books.

1993-95 Teaching Assistant, Sociology Dept., UC Davis, Davis, CA

Developed course materials, taught classes, and advised undergraduate students for several classes: social science statistics, complex organizations, corporations and society, and social problems.

1993, 94 Research Assistant, Recidivism Study, California Youth Authority, Sacramento, CA

Summers Conducted data analysis of recidivism rates of 2,000 juvenile delinquents released from the California Youth Authority. Managed a large data set (over 2,000 fields for each of over 2,000 records), imported and cleaned keypunch data. Conducted statistical analyses using SPSS, wrote codebook, and prepared data and reports for public distribution.

1992 Team Leader For Customer Phone Survey, Evaluation Research Class, UC Davis, Davis, CA

Worked with 16 undergraduate students to design, execute, and analyze a customer satisfaction evaluation with the UCD campus box office using a telephone survey as the evaluation tool. Participative style generated buy-in by team members, creating a true team effort. Oversaw statistical analysis of data, written report, and presentation of results to stakeholders.

Chronological Experience *continued*

- 1990-91 NeXT Campus Computer Consultant, Davis, CA**
Provided technical and sales support to NeXT users on the UC Davis campus and the surrounding Sacramento area. Designed advertising program, conducted demonstrations, made presentations, and conducted trainings. Established a NeXT users group. Provided technical and programming support to campus and regional users including: Unix scripting and NextStep programming, system configuration, network setup, and telephone, on-line, and in-person support.
- 1989-90 Computer Programmer, MECC (Now part of The Learning Company), St. Paul, MN**
Developed commercial educational software on the Macintosh including *Oregon Trail*, *Wagon Train 1848*, *Number Munchers*, and *Word Munchers*. Member of the company-wide quality group. Worked with marketing team. Development was in C using the Macintosh Programmers Workshop, a Unix-like development environment.
- 1987-89, Computer Programmer, Cornell University Education Dept., Ithaca, New York**
1986 Software designer and programmer for research in math education funded by the National Science Foundation and Apple Computer. Project comprised of algebraic manipulation, calculator, table, and graphing environments which influenced the design of Texas Instruments' graphing calculator. *Function Probe* and *Function Finder* software was used to explore students' acquisition of mathematical concepts, different learning styles, and discovery learning in pre-calculus courses. Software developed in Object Pascal and the MacAp object oriented framework; largest program was over 60,000 lines of code. Helped hire and supervised several members of the programming team. Selected software tools, managed project timelines and schedules. Observed students and solicited feedback from users about prototype software; used feedback to make it a more effective teaching tool to achieve the desired educational objectives. Coordinated software developers user group.
- 1987 Computer Programmer, Cornell University Meteorology Dept. Ithaca, New York**
Directed development of educational software, *the Weather Modeling Kit*, on the Macintosh for students to experiment with weather models for data from famous historic storms. Used Pascal and FORTRAN. Supervised two programmers. Responsible for overall project flow and design.
- 1985-89 Instructor, Cornell University Outdoor Education, Ithaca, New York**
Head instructor for more than 8 courses. Taught instructors' course. Interviewed, hired, and trained instructors. Coordinated and edited rock climbing instructors' hand book. Created new *Bike and Hike* course. Attended four-week outdoor leadership course in Wyoming. Member of advisory board that oversaw 40 instructors; directly supervised instructors.
- 1984-86 Cabinetmaker/Carpenter, Cleveland Avenue Associates, Ithaca, New York**
- 1982-84 Cabinetmaker/Carpenter, Taylor Construction Company, Tappan, New York**
- 1980-82 Computer Programmer, Case Institute of Technology, Cleveland, Ohio**
Designed and implemented software for faculty advisors to track student records. Developed a C-like portable I/O library in Pascal to make porting program easier.
- 1976-82** Managed high school computer lab, programmed in BASIC and FORTRAN, taught Logo course for high school students, worked in bicycle repair shop and picture frame shop.

Volunteering and Consulting

- 2001-13** Provided volunteer technical advice and assistance to Ithaca NY organizations including the Sciencenter, Cayuga Nature Center, and New Roots Charter School. Built interactive exhibits for Cayuga Nature Center.
- 2001-13** Parent Volunteer at Fall Creek Elementary School, Boynton Middle School, and New Roots Charter School.
- 2009-10** **Museum of Science, Boston MA**
Migrated multiple independent systems into a single online multi-user database to track contacts, professional development interactions, publications, and outreach efforts by a network of museums and scientists engaging the public in nanoscale science, engineering and technology. System was used to gather data and generate reports for NSF reporting compliance.
- 2007-08** **Ithaca City School District Tech Boosters**
Organized and advocated for increased opportunities inside and outside of school for students interested in learning more about technology and engineering.
- 2005-06** **Sciencenter, Ithaca NY**
Developed software for *Magnification Station* as part of the *Too Small To See* traveling exhibition used by millions of visitors across the United States including at Epcot. Worked with astronomers and educators to develop Flash program for two exhibits: *Life of a Star* and *Infrared Explorer* in permanent *Mars and Stars* gallery.

Publications and Presentations

Paul Davis (2006) *Magnification Station* interactive science museum exhibit software for Sciencenter, Ithaca, NY.

Paul Davis and Maureen Bell (2006) *Infrared Explorer* and *Life of a Star* interactive museum exhibit software for Sciencenter, Ithaca, NY.

Doug Hexter, Paul Davis, Craig T. Higgins and Mark J. Otis (2005) *Growing a Successful Graduate Application System* Educause Northeast regional conference.

Ted K. Bradshaw, Kevin M. Kennedy, Paul Davis, Larry L. Loyd, Nokuthula Gwebu, Jerold A. Last (2003) Science First: Contributions of a University-Industry Toxic Substances Research and Teaching Program to Economic Development, *The Journal of Higher Education*, vol 74, No.3 (May/June), pages 292-320.

Conducted numerous presentations to Cornell campus staff and administrators on a variety of software packages and web interfaces including: CommonSpot, Contribute, Filemaker, Engineering College intranet, GAPS graduate application processing system (2001-2006).

Conducted presentations for faculty and staff from nine UC campus on UC TSR&TP's web interfaces for grant reporting and research finding submission, UC Toxic Substances Research and Teaching Program Annual Symposiums (1997-2000).

Conducted training seminars on bibliographic databases, statistics, e-mail including Eudora and Pine, word processing, and general computer usage for the UC Davis Sociology Department and the Hubert Humphrey Fellow Program (1994-95).

As NeXT sales person, demonstrated NeXT software and hardware at numerous conferences and workshops (1990-91).

Callahan, S., C. Copley, P. Davis, C. Kapplinger, W. Studer, J. Thompson, and P. Wenker (1991). *Wagon Train 1848*, Minnesota Educational Computing Corporation

Callahan, S., C. Copley, P. Davis, C. Kapplinger, W. Studer, J. Thompson, and P. Wenker (1991). *Oregon Trail for the Mac*, Minnesota Educational Computing Corporation (MECC).

Callahan, S., C. Copley, P. Davis, C. Kapplinger, W. Studer, J. Thompson, and P. Wenker (1990). *Word Munchers for the Mac*, Minnesota Educational Computing Corporation (MECC).

Callahan, S., C. Copley, P. Davis, C. Kapplinger, W. Studer, J. Thompson, and P. Wenker (1990) *Number Munchers for the Mac*, Minnesota Educational Computing Corporation (MECC).

Confrey, J., P. Davis, and F. Carroll (1989) *Function Probe*, an algebra manipulation and graphing program for use in calculus and pre-calculus classes and for math education research.

Demonstrated *Function Probe*, at workshops and classrooms (1987-89).

Paine, D., P. Davis, and K. Lyon (1987) *The Weather Modeling Kit*, Cornell University Meteorology Department, published through Kinko's Courseware Exchange.

Introduced and demonstrated *The Weather Modeling Kit* at the 1987 Macademia conference.

Confrey, J., P. Davis, and F. Modugno (1986) *Function Finder*, Cornell University Math Education Department, published through Kinko's Courseware Exchange.