James R. Davis

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Education

Ph.D. **MIT Media Laboratory**, September 1989
My thesis, Back Seat Driver, describes a program that gives spoken driving directions in real time to the operator of a car.

B.S. **MIT**, December 1976
I designed my own course of study to include computer science, graphics, artificial intelligence, and architecture.

Professional experience

Mar 2014 – date: Software Development Engineer II, **Amazon Canada**, Toronto
I build web services to support the supply chain operations of Amazon, using Java and and Ruby on Linux.

May 2007 – Mar 2014: Technical Architect, **Klick Communications**, Toronto
Klick is a marketing communications firm whose services include (but are not limited to) custom web applications for relations management, product promotion, and enterprise management. I worked with clients to understand their business requirements, then architected and constructed web sites and web services to meet those needs. I worked in C# on Windows and Ruby on Linux, and various Javascript client-side frameworks

Feb 2007 – May 2007: Software Consultant
Independent consultant with clients in the greater Toronto area.

August 2004 – January 2007: Senior IT Consultant, **Ontario Principals' Council**, Toronto
Responsible for design, construction, and maintenance of information systems for the members (5000 public-school principals in the province) and staff (36 employees) of a non-profit organization. These include a proprietary customer relations management system, the customer-facing website, a proprietary content management system, a second web site providing tools for administering the programs of the OPC, and an online training system. I designed user interfaces, implemented them in VB.NET and Access, and I administered the SQL databases.

April 2001 – July 2004: Software Architect, **Intelligent Markets**, San Francisco, CA.
I was part of a team of about eight engineers developing an application for order and trade management in the financial services industry. The client is in C++ and Javascript, the server in Java. I worked on many aspects, including client implementation, server implementation, user interface and prototyping, and end-user documentation. The client used what is now called the "AJAX" architecture.

Oct 2000 - April 2001: Senior Staff Architect, **Sybase**, Emeryville, CA
I was the architect for Sybase's B2B services in its Enterprise Portal web server.

Oct 1999 - May 2000: Visiting Scientist, **CWI**, Amsterdam, NL
While on leave from Peer3, I was a visiting scientist at the CWI, the Dutch Center for Mathematics and Computer Science, in Amsterdam, the Netherlands, where I did research on

employing theories of rhetorical structure to improve automatic generation of multimedia documents.

March 1999 - Oct 2000: Senior Principal, **Peer3** (formerly CourseNet Systems), San Francisco, CA
I helped design and develop a Java system for creating and distributing education on the Web for this start-up. The delivery system uses JSP, the authoring system is Swing-based. I also led product definition, and contributed to the SCORM XML-standard for exchange of instructional data. The company was sold to Technology Solutions Corporation in 2000.

August 1996 - March 1999: Member of Research Staff II, **Xerox PARC,** Palo Alto, CA
I was principal architect of several document management systems. In 1988, I began working on the IETF working groups for WebDAV and DASL. I am an author of several of the WebDAV Internet Drafts. I was co-organizer of a 1996 NSF workshop on Terms and Conditions for Digital Objects. I was on the program committee for the 1998 ACM Digital Library conference.

July 1991 - 1996: Member of Research Staff II, **Xerox**, Ithaca, NY
At the Design Research Institute, a collaboration between Xerox and **Cornell University**, I developed NCSTRL, a distributed digital library for computer science technical reports used at over forty universities. With Dan Huttenlocher, I developed CoNote, which provides shared annotation of structured documents. I have three awards from Xerox for excellence in research.

Sept. 1990 to July 1991: Postdoctoral Research Associate, **MIT Media Lab**, Cambridge, MA
I worked on Tod Machover's Hyperinstruments project, designing and implementing a real time music system used in a piece composed by Machover and performed by Yo-Yo Ma at Tanglewood, MA.

Sept. 1989 to Sept. 1990: Postdoctoral Research Associate, **MIT Media Lab**, Cambridge, MA
I developed a system for tracking researchers in the building using active badges. I also continued development of my thesis project, the Back Seat Driver.

Summer 1987: research staff, **AT&T Bell Telephone Laboratories**, Murray Hill, NJ
I wrote a system to automatically assign intonational features to convey discourse information.

Summer 1986: research staff, **Thinking Machines Corporation**, Cambridge, MA
I implemented an optical character recognition system for the Connection Machine and designed a window-oriented debugger for parallel Lisp on the Connection Machine.

Summer 1985: research staff, **Thinking Machines Corporation**, Cambridge, MA
I designed Direction Assistance, an interactive program that gives driving directions over the phone.

1984 to 1985, software consultant, Cambridge MA.
I built a prototype of an intelligent design assistant for heating and ventilation; this helped my clients obtain initial funding for their startup, which later went public.

1982 to 1984: research staff, **Atari Cambridge Research**, Cambridge, MA
I coordinated a computer music project, designing interactive environments for composing and sound design.

1981 - 1982 Systems Programmer, **Logo Computer Systems, Inc**, Boston, MA
I was part of the team that brought the educational language Logo to the Apple II. This was my first startup. We delivered on time, on budget, and bug free.

1979 - 1981 Systems Programmer, **Honeywell Cambridge Information Systems Lab**, Cambridge, MA
Systems programmer on Multics. Multics was the most advanced time sharing system of its day.

1977 -1979 Programmer, **Imlac**, Natick Ma.
Assembly language application programming for a (then) state-of-the-art text processing system.