
Eli Brandt

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Education

Ph.D., Computer Science 8/95 to 7/02
Carnegie Mellon University

Completed Ph.D. in July 2002: designing programming languages for handling time-structured data.

B.S., Mathematics 9/91 to 5/95
Harvey Mudd College

Graduated with high honors, commendation in mathematics, commendation in humanities.

Work Experience

Summer intern 5/00 to 8/00

IBM Research, Computer Music group

Worked with end users to create a novel kind of tool for film-score composition.

Designed and built the data-browsing component of this tool, using Qt.

Summer intern 5/99 to 8/99

IBM Research, Computer Music group

Extended the type system of the real-time visual language Sonnet, using C++ STL and COM.

Summer intern 5/98 to 8/98

IBM Research, Computer Music group

Analyzed MIDI timing over alternative physical layers.

Evaluated the Win32 DirectShow architecture and provided analysis and documentation.

Graduate assistant, CMU CS 1/98 to 5/98

Ported Aura (a multithreaded real-time distributed object system written in C++) from

Win32-only to Irix, for use in an interactive multimedia show at the Pittsburgh Science Center.

Summer intern 5/97 to 8/97

Microsoft Research, User Interface group

Adapted old software to use current audio and timing APIs.

Developed research platform for streaming audio synthesis.

Created parametric synthesis models of rain, sleet, and other environmental sounds.

Skills

Communication

Wrote PhD dissertation; prepared a thesis defense presentation.

Gave half a dozen talks at international conferences.

Technical

Fluent in C++ and C.

Experience with real-time and distributed systems, threads, object-oriented design, UI development,

Unix and Win32 systems programming, COM, HTML, Fortran, Matlab, APL, Perl, STL.

Organizational

Planned and executed thesis work over several years.

Refereed Publications

Eight papers (five as first or sole author) on domain-specific programming languages, real-time and distributed systems, MIDI performance measurement, signal processing, and parallel computing.

Citations on request, or see <<http://www-2.cs.cmu.edu/~eli/professional.html>>.

Interests

Didjeridu, scuba diving (PADI AOW certified), woodworking, recording electronic music.

References

Available on request.