

Dr. Mark J. Boyd

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Objective:

To lead a research or product team.

Career Experience:**eBay, Inc.****Staff Research Scientist, eBay Research Labs****10/2005 - Present**

Researched various areas related to peer-to-peer marketplaces and payments. Focused on robust reputation and payment systems, and cannibalization analysis and testing for new features. Directly supervised two development engineers, five interns, and three analysts over the course of four projects. Filed patents for a secure token system and a robust reputation calculation system. Inventor and development manager for prototype of a web-wide widget for dynamic reputation, pricing, micropayment and online fulfillment for digital goods. Development manager for a novel reputation visualization application interface, "feedback sparklines." Initiated and completed persuasive analysis which drove the reversal of the "SIF results in core" search feature. Completed analysis of cannibalization effects of banner advertising. Led a team of three analysts to complete analysis of relative profitability of intra-network versus through-network payments. This analysis was the first to quantify the benefit of stored value for the PayPal peer-to-peer payment system. Led Research Labs promotional teams for WWW 2007, eBay DevCon 2006, and eBay DevCon 2007 conferences. Committee member for WWW 2007 Query Log Workshop and ENISA Reputation and Web of Trust track. Supervisor: Dr. Neel Sundaresan

University of California at Santa Cruz**Researcher and Lecturer****7/2005 - 12/2005**

Researched applications for a parallel content addressable memory, including parallel filtering and unary representations for fuzzy pattern matching. Taught an entry level computer engineering course with 200 students, two teaching assistants, and five tutors/graders. Supervisor: Dr. Richard Hughey

University of California at Santa Cruz**Doctoral Candidate****9/1999 - 6/2005**

Designed and patented a novel parallel supercomputer for use solving problem in circuit and system testing. The design is the fastest known architecture for solving several important classes of Boolean satisfiability benchmark problems. Developed and tested software for matrix encoding, manipulation, translation, and loading of SAT problems into the hardware memory architecture. Completed implementation and testing of an array of connected Xilinx FPGAs (Field-Programmable Gate Arrays). Implemented parallelism using pipelining, paging, threading, and fanin/fanout high-speed design variants. Supervised three undergraduate research assistants. Supervisor: Dr. Tracy Larrabee.

Lucent Technologies, Bell-Labs Research
Senior FPGA Engineer
6/1999 - 9/1999

Worked as a contractor for a DARPA systems testing grant to design a system for on-line BIST (Built-In-Self-Test) of FPGAs. Developed software to control BIST and the results of online testing. Used detailed knowledge of gate array technology to successfully implement partial reconfiguration of the Lucent ORCA device during concurrent circuit operation. Also developed a novel ring oscillator delay measurement technique to improve the design. Contributions ensured progress of project goals and contributed to later publications of the Principal Investigators. Supervisor: Dr. Miron Abramovici.

University of California at Santa Cruz
Graduate Student Researcher
9/1996 - 5/1999

Completed coursework in ASIC and architecture design, systems test and verification, networking protocols, JPEG and MPEG standards, object oriented programming, and project management. Evaluated as “best in the class” in over half of the required courses. Completed novel research in each coursework area, using Perl, C/C++, Java, and various test and circuit design tools and methodologies. Acted as a Teaching Assistant for an introductory computer science course. Awarded a Regents Micro-Fellowship. Supervisor: Dr. Tracy Larrabee.

Self-Employed, part-time
Flight Instructor/Pilot
3/1993 - Present

Worked part-time as an FAA certified flight instructor (CFI) in single and multi-engine airplanes, in instrument flight, and in gliders. Conducted over 600 hours of one-on-one flight training. Prepared 13 pilots for FAA flight tests, with a 92% first-time pass rate. Awarded by the FAA as a “Gold Seal” CFI. Selected as a Master Instructor by the National Association of Flight Instructors (NAFI). Holder of five California state soaring records in the “World Class” glider.

United States Army
Intelligence Officer, Captain
9/1990 - 5/1996

Led collection and synthesis of human-source, imagery, and signals databases. Acted as intelligence and weather primary staff officer in Seoul, Korea for an intelligence brigade of over 1500 soldiers. Prior to that at El Paso, Texas, led a team of 40 soldiers as an Electronic Warfare platoon leader, and spent three years as a primary intelligence and weather staff officer for a helicopter squadron with 80 helicopters and 600 soldiers. Discharged honorably from active duty at the rank of Captain.

Education:

University of California - Santa Cruz-CA-United States
Computer Engineering
Ph.D.-Doctorate 6/2005

University of California - Santa Cruz-CA-United States
Computer Engineering
MS-Master of Science 6/1999

United States Army - Various Locations

Combined Arms and Staff Services School (Army Reserves) 3/1999

Intelligence Officer Advanced Course 5/1995

Intelligence Officer Basic Course 3/1991

University of California - Los Angeles-CA-United States

Political Science

BA-Bachelor of Arts 12/1990

Additional Information:

Produced eight half-hour episodes of a community television series "On The Spot."

Credit Director on Westwood Student Federal Credit Union Board of Directors 1989-1990.

References:

Eric Billingsley, Technical Fellow, eBay, Inc.

Dr. Neel Sundaresan, eBay Research Labs

Dr. Tracy Larrabee, CE Dept, University of California at Santa Cruz

Dr. Richard Hughey, Computer Engineering Department Chair, UCSC

Dr. Miron Abramovici, Chief Technology Officer, DAFCA