

DAVID MONTANA

15 Hathaway Circle, Arlington, MA 02476

Home: 781-641-1611, Cell: 339-368-0042, Email: dmon60@gmail.com

Objective: I am an expert software developer and algorithm developer searching for challenging problems to tackle.

Software Skills

Programming Languages: Java (12 years), C/C++ (10 years), Python (1 year), PHP (2 years), Perl (1 year), Objective-C (2 years), Ada (3 years), Lisp (4 years)

Other Skills: SQL, HTML, Windows system programming, Linux/UNIX, Socket programming, Distributed systems, Visual Studio, JSP, Embedded programming, QuickTime, CoreAudio

Education

Ph.D. (Applied Mathematics / Robotics) Harvard University, 1986

B.A. (Applied Mathematics / Decision & Control) Harvard University, 1982

Professional Positions

BBN Technologies (Cambridge, MA), Lead Scientist, 1986 – 2013

- Software and Algorithm Developer: Implemented components of deployed military and commercial systems. Developed applied research prototypes.
- Technical Lead: Led small groups of other developers. Managed budget and work responsibilities.
- Business Development: Wrote proposals and white papers. Visited potential customers.

Application Domains

Cyber Security (2007-2012): Mostly classified. Performed some unclassified work on (i) securing BGP using a resource PKI and (ii) determining malware lineage and provenance.

Scheduling and Logistics (1995-2007): Helped develop (i) two custom commercial field service scheduling systems, (ii) a military aircrew scheduling system, and (iii) a large multi-agent society for military logistics.

Acoustic Signal/Information Processing (1986-1995 and 2005-2007): Helped develop distributed underwater sonar system from prototype through deployment. Performed acoustic transient classification. Created system for stock exchange floor surveillance.

Robotics: Developed a differential geometric description of contact kinematics applicable to the control of multi-fingered manipulation. Created multi-robot cooperative path planning algorithms.

Others: Networking (including protocol optimization, configuration optimization), traffic signal control, evolvable hardware, and topic spotting.

Algorithmic Techniques/Areas: genetic algorithms, genetic programming, neural networks, statistical machine learning (SVM's, decision trees, etc.), multi-agent systems, rule-based systems, etc.

Editorial Positions: Editorial board member of four journals, including seven years as Associate Editor of *Evolutionary Computation*

Papers: Over 40 refereed papers published in journals, book chapters, and conference proceedings

Patents: Recipient of three patents, two in evolutionary scheduling and one in evolutionary robotics

Security Clearance: Top Secret

More information online: See <http://davidmontana.net> for a detailed list of projects, papers (including downloadable copies), editorial positions, and patents.