

94 Neal Street Apt 3
Portland, ME, 04102

<http://www.arborrhythms.com>
alec@arborrhythms.com

Education

MS Electrical Engineering, BS Psychology, BS Computer Science
Portland State University (3.87 GPA), Reed College, Cornell University, Boston University

Experience

- | | | |
|--|---|-------------|
| Various | Psygraph, Halio, Wonderwell, NeuroDimension | 2013-2015 |
| <ul style="list-style-type: none">• Created a cross-platform phone app for Android and IOS• Wrote a data-gathering plugin for WordPress• Taught JavaScript programming to high school students in Thailand• Served as a retreat manager at a Buddhist retreat center• Contract programming for the NeuroSolutions MATLAB toolbox | | |
| Team Lead, System Objects | The MathWorks | 2011 - 2012 |
| <ul style="list-style-type: none">• Technical lead, System Objects Infrastructure (a team of four developers).• Responsible for release planning, inter-team coordination, etc. | | |
| DSP & Computer Vision Engineer | The MathWorks | 2006 - 2011 |
| <ul style="list-style-type: none">• Created AudioPlayer/AudioRecorder Simulink blocks and System objects.• UDP Send/Receive blocks (using the Boost ASIO library).• Authored the DirectShow architecture used by the To/FromMultimediaFile and Video Device blocks.• Implemented USRP2 blocks to enable Software Defined Radio for the Communications blockset. | | |
| Scientific Data Formats Developer | The MathWorks | 2003 - 2006 |
| <ul style="list-style-type: none">• Created an interface to the HDF5 file format (the basis of the v7.3 MAT file format).• Upgraded a large number of image processing libraries (JPEG, TIFF, etc).• Provided technical support to customers, engaged in extensive training with MathWorks products | | |
| Software Engineer | Kumulipo, Inc. | 2001 - 2002 |
| <ul style="list-style-type: none">• Ported Jasmine™ audio software to MacOS X (from MacOS 8/9), using QuickTime.• Implemented a phase vocoder algorithm to shift the length/pitch of digital audio recordings (using a short-time FFT). | | |
| Academic Researcher | NW Computational Intelligence Lab | 2000 - 2001 |
| <ul style="list-style-type: none">• Developed fuzzy logic and neural network controllers for non-linear plants.• Researched control methods using the Dual Heuristic Programming paradigm.• Wrote a paper for an international fuzzy logic conference (IFSA/NAFIPS). | | |
| Computer Programmer | ArborRhythms | 1994 – 1997 |
| <ul style="list-style-type: none">• Learned C++, Windows API to write and bring a musical shareware product to market.• Worked extensively with MIDI, WAV, AIFF and AU file formats. | | |

Skills & Interests

Programming Languages: Proficient at C++, C, MATLAB, Java, Microsoft (COM, DirectShow, Win32 API), JavaScript, XML, HTML, UML, Perl, PHP, assembly (x86, TI TMS 320 C3X) on Windows, MacOS, Linux, Android, and IOS.

Psychology: Artificial intelligence (neuronal and cognitive modeling using linear and non-linear models), biofeedback, behavioral conditioning, Buddhist psychology.

Audio: Extensive audio programming and signal processing experience, running soundboards and PA systems (on a volunteer basis).

Publications and Presentations

Alec Rogers, *Mathematics of Enlightenment*, a poster session presented at the 2014 Mind and Life Conference in Boston, MA.

Alec Rogers, *Cognitive Set Theory*, April 2012.

Alec Rogers, T. Shannon & G. Lendaris, *A Comparison of DHP Based Antecedent Parameter Tuning Strategies for Fuzzy Control*, IFSA/NAFIPS Conference, Vancouver, B.C., July, 2001.

George Lendaris, T. Shannon, L. Schultz, S. Hutsell & A. Rogers, *Dual Heuristic Programming for Fuzzy Control*, IFSA/NAFIPS Conference, Vancouver, B.C., July, 2001.

References

Available on request.