

# Jonathan D. Lettvin

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## OBJECTIVE

Seeking a position generating zero-bug code in python or C++. Experienced in operating systems, editors, compilers, data ingesters, lattice math, and feature detection. Interested in gpu and map/reduce.

## QUALIFICATIONS

- ◆ Python (scipy, pil, comprehensions, itertools, unittest, pygame);
- ◆ C++ (STL, CUTE, OpenGL);
- ◆ iAPX86 assembler, php, javascript, HTML, XML, LaTeX, bash;
- ◆ Mediawiki, svn, gcov, doxygen;
- ◆ linux, unix, Windows, proprietary real-time OS, Multics.

## PROFESSIONAL EXPERIENCE

### Consulting Senior Software Engineer

AER Lexington, MA, USA 2011-2011

- ◆ Python: wrote regression test code for GOES-R Algorithm Test Tools project;
- ◆ C++: Adopted, corrected, and delivered Aerosol Detection Product module;
- ◆ Coded subject to government coding standards and code review.

### Lead Consultant

Aneuram Watertown, MA, USA 2009-2011

- ◆ Developed artificial retina using patented algorithms;
- ◆ Developed novel circuits for high dynamic range signal transduction;
- ◆ Developed contrast/color invariance, aberration inversion, noise reduction;
- ◆ Developed lattice calculations for physics modeling;
- ◆ Wrote proposal to present for DARPA BAA 0865 Ma;thematical Challenges "The Mathematics of the Brain";
- ◆ Restarted consulting company to retain IP;
- ◆ Wrote four patents 7952626 7796173 5826012 5559960 two on neural transforms and two on antivirus.

### Chief Scientist

Zipix Burlington, MA, USA 2008-2009

- ◆ Developed contrast enhancement and sub-pixel discrimination algorithms;
- ◆ Raised \$1.2M and launched company.

### Consulting C++ Mentor

Investment Technology Group Boston, MA, USA 2008

- ◆ Taught Physicists/Traders how to implement C++ with C++, and doxygen;
- ◆ Developed high performance, high quality, mathematically correct market feed lexer for BATS-PITCH;
- ◆ Wrote function-based bash scripts measuring market-feed health.

### Consulting C++ Extreme Programming Peer

Soapstone Chelmsford, MA, USA 2007-2008

- ◆ Wrote/maintained IDL compiler linking distributed software over dynamic topology network;
- ◆ Acting primary example of Peer Programmer to show improved productivity.

### Software Engineer

Bluefin Robotics Cambridge, MA, USA 2006

- ◆ Developed full Navy approved system architecture diagrams, state diagrams and reference manual;
- ◆ Developed novel hyperacute littoral seafloor sonar reconstruction algorithms.

## MAJOR PRIOR POSITIONS

### Principal/Advisory Software Engineer

Lotus/IBM Cambridge, MA, USA 1987-2002

- ◆ Spearheaded Lotus 1-2-3 for Unix including new internal scheduler;
  - ◆ Launched Lotus antivirus group, architected and patented its search and recovery methods;
  - ◆ Developed assembler glue layers (e.g. to re-attach 1-2-3 from Windows back down to DOS);
  - ◆ Designed and developed high-speed compression/decompression algorithms;
  - ◆ Researched and implemented 40% increase in speed and volume of floppy disks;
  - ◆ Aided Lotus manufacturing in design of virus-free diskette duplication service;
  - ◆ Handled virus detection and diskette signal analysis on customer returned diskettes;
  - ◆ Wrote extremely efficient high speed XML lexer;
  - ◆ Wrote proposal to efficiently distribute OS patches to IBM customers using multicast;
  - ◆ Kept Lotus the only major software company to claim to have never distributed viruses;
- ◆ 1987-2002
- ◆ Developed and delivered last testably bug-free product ever produced by Lotus;
  - ◆ Did PR, external training, and executive briefings on virus and security related issues.

### Director of Software Development

Ecco Industries, Inc. Danvers, MA, USA 1985-1987

- ◆ Developed proprietary real-time operating system for high performance biometrics on IBM PC
- ◆ Developed ROMmable code for NEC DSP

## EDUCATION

### Bachelor of Science (Physics)

Massachusetts Institute of Technology, Cambridge, MA, USA 1976