David A. Smith

https://dacvs.neocities.org/
dsmith@alumni.caltech.edu
406-203-8553

Passed actuarial exam P

System programmer
- Writing system software
in x86-64 machine code and Forth

Software Solutions Developer
Aptus Engineering, Scottsdale AZ
- Investigated the academic literature and
performed exploratory programming in job scheduling,
artificial neural networks, natural language processing,
and user interfaces for manipulating geometric objects.

Programmer and videographer
- Made videos on programming
in x86 machine language

Virtual Construction Application Developer
Sundt Construction, Tempe AZ
- Wrote and implemented algorithms
to design cost-optimal structures
- Wrote basic productivity applications

Programmer
- Wrote system software and
mathematical applications in Forth

Data Scientist
Quid Inc., San Francisco CA
- Wrote fast C-code variations on known
methods of partitioning the vertex set of
a weighted similarity graph
- Created Python tools with NetworkX and
heuristic algorithms to compare partitions;
and with SciPy to compare search result lists
- Visualized both kinds of comparison with
PostScript plots made automatically
- Developed a method to infer associations
between vertex labels in graphs
described in US patent 9710544
- Wrote technical evaluations of free and
commercial natural language proc. software

Software Engineer
Newfield Wireless, Berkeley CA
- Wrote C++ server software

Programmer
Semel Institute for Neuroscience at UCLA
- Processed large genomic data sets
on the Hoffman2 cluster (Unix)
- Implemented graph algorithms in Python

Lead Software Engineer
Mitretek Systems, Falls Church VA
- Wrote public key infrastructure software
in C++ for federal agencies
- Built an LDAP spider for X.509 cross-
certificate webs using the Boost Graph Library

Software Engineer
Leverage Information Systems, SF CA
- Wrote Java server software for high-volume
web sites with Linux, Apache, and MySQL
- Contributed to the open-source
Locomotive Application Server

Software Designer
Tandem Computers, Cupertino CA
- Developed an intraweb document
management application in Perl and C

Instructor
California State University, East Bay
- Taught Math 2150, an introduction
to Discrete Mathematics for students
of Computer Science

Visiting Assistant Professor
Grand Valley State University
- Taught linear algebra, differential
equations, and calculus
- Developed weekly computational
exercises for calculus students

Ph.D. Mathematics
Teaching & Research Assistant
Arizona State University
- Dissertation: The first-fit algorithm
uses many colors on some interval
graphs
- Used GLPK, Matlab, Maple, Sage,
Python, Tk, Haskell, and C
- Taught Discrete Mathematical Struc-
tures to computer science students
- Supervised an undergraduate honors
project involving Java programming

M.S. Mathematics
Lecturer, Teaching Associate
California State University, Long Beach
- Graduate Dean's List of Scholars
and Artists
- Taught Calculus 2 and 3 to
computer science students

B.S. Mathematics
California Institute of Technology
- Studied manipulation in voting with
computer programs in C
- Assisted in developing a novel
application of optical fibers for
the Mars 94 Oxidant Experiment

22
21
20
19
18
17
16
15
14
13
12
11
10
09
08
07
06
05
04
03
02
01
00
99
98
97
96
95
94
93
92