

# JEFFERY A. CAVALLARO

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21 May 2023

## SKILLS

- 40+ years of computer software experience, spanning all phases of the software development life cycle, in the defense/aerospace, commercial, and academic sectors.
- Experience in a wide range of roles, including working independently, working as a team member, leading teams of various sizes, and a small business owner.
- Design, development, testing, deployment, maintenance and (on-call) support of internal and customer-facing, high-availability systems.
- Primary skills include C/C++ and Python on Linux platforms. Past projects included heavy use of Java, Perl, Ruby, and assembly languages.
- Ability to act as a platform engineer and system administrator.

## EXPERIENCE

12/20 to Present

### NORTHROP GRUMMAN ~ Redondo Beach, California

*Software Engineer (T4)* —

Currently assigned to the AMP project software development team. Duties include software development in Python and C++ for projects using Couchbase NoSQL, FastAPI, Kafka, and LDAP.

*Software/Platform Engineer (T4)* —

Assigned to the F35 project software development team as a platform engineer and system administrator in support of the application developers. Duties included installation and support of the team's agile-related toolchain, including Bitbucket, Jira, and Jenkins, acting as a resource to help resolve C++ coding and build problems, management of a set of legacy Perl-based build tools, and the development of various administration support tools (e.g., backups) in Python.

Clearance: Top Secret (current)

08/20 to 12/20

### ST MARY'S COLLEGE OF CALIFORNIA ~ Moraga, California

*Adjunct Assistant Professor of Mathematics* —

Per-course adjunct instructor of record for precalculus/calculus classes.

05/20 to 12/20

### AMAZON FULFILLMENT CENTER (USF1) ~ Santa Clara, California

*FC Associate* —

Warehouse worker responsible for customer order fulfillment and stowing of inbound merchandise.

01/19 to 05/20

### SAN JOSE STATE UNIVERSITY ~ San Jose, California

*Mathematics Instructor and Student Researcher (TA/Grad)* —

Instructor of record for precalculus, calculus, and discrete math classes while a graduate student at SJSU. Area of study was graph theory, specifically the chromatic

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coloring of graphs. Extensive use of C++ for random graph analysis in support of research.

01/18 to 10/18

## **GRAND ROUNDS ~ San Francisco, California**

*Platform and QA Engineer* —

Delivered virtualization and cloud solutions using vagrant, virtualbox, docker, and AWS in support of various apps groups. Fixed flakiness in existing and developed new automated UI tests using a site-prism/capybara/selenium-webdriver framework driven by Jenkins. Work was primarily in Ruby, with an emphasis in encryption services and probing application context in AWS/S3, MySQL, and Postgres.

08/15 to 12/17

## **SAN JOSE STATE UNIVERSITY ~ San Jose, California**

*Mathematics Instructor (TA/Grad) and WeBWork Programmer* —

Various teaching assignments while a graduate student at SJSU. Lead programmer on a project to design and develop SJSU's next generation of developmental math classes on a WeBWork-based platform. WeBWork is a Perl-based problem authoring tool.

11/06 to 08/15

## **GOOGLE, Inc. ~ Mountain View, California**

*Software Engineer* —

Initially hired by Postini, Inc. (San Carlos, California), which was acquired by Google in September 2007. Member of a team that maintained and extended a line of corporate-strength, high-compliance email management and security products serving millions of users worldwide, written in C++ and Perl, with application data maintained in an Oracle RBDMS. C++ work involved heavy use of the STL for both application and system-level middleware. Also worked on a customer-facing web service migration tool, written in Java, that was used to transition customers from the legacy product to the new Google infrastructure-based product. Specific experience deploying and maintaining the migration tool within the Google borg cloud.

05/06 to 11/06

## **NORTHROP GRUMMAN MISSION SYSTEMS ~ Dominguez Hills, California**

*Systems Engineer* —

Continued work on the JTRS Cluster 1 (GMR) project. Tasks included system interconnect analysis; antenna thermal, pressure, and mechanical analysis; and primary responsibility for the recurring hardware proposal effort.

Clearance: Interim Secret

06/01 to 05/06

## **Independent Contractor ~ Fremont, California**

*Northrop Grumman Mission Systems (Dominguez Hills, CA)* —

Communications systems engineer for the JTRS Cluster 1 project. Duties included antenna, waveform, and link budget analysis for a major effort to replace all military communications with the next generation of waveforms and software radios.

*Amir Technology Labs (Sunnyvale, CA)* —

Analysis of and development for an existing Linux thin-client product. Tasks included C/C++ programming, CGI programming, GTK programming, and system configuration management in an embedded Linux environment. Specific subject areas included ACPI and wireless internet connectivity.

*Watchmark (Pleasanton, CA)* —

Continuing support of the Nortel wireless switch data acquisition software for Prospect, WatchMark's performance management tool. Tasks included UNIX/C programming.

*QCR (Torrance, CA)* —

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Subcontractor to SEAKR (Denver, CO), WatchMark (Bellevue, WA), Verizon Wireless (Walnut Creek, CA), and TRW (now Northrup Grumman Mission Systems, Redondo Beach, CA). Tasks included UNIX real-time event management middleware design and implementation, portable software library design and management, GNU software management, NETBSD device drivers, embedded systems for communications and power control applications, and maintenance work on Verizon's cellular network element performance data acquisition system.

05/00 to 8/04

### **ABC RADIO (KGO/KSFO/KMKY) ~ San Francisco, California**

*Account Executive, Production Director, Live Show Producer, Board Operator, Local Personality, Promotions Team* —

Took a small break from the hi-tech world to work in local radio sales, programming, and promotions.

11/98 to 05/00

### **AIRTOUCH CELLULAR, Inc ~ Walnut Creek, California**

Senior Software Engineer —

Continued work as a technical lead on AirTouch's cellular network performance monitoring system.

1/95 to 11/98

### **CAVCOM, Inc ~ Lawndale, California**

Chief Consultant/CEO —

Owner of a computer hardware and software consulting services and sales firm. Projects included the design and development of UNIX/C-based cellular network monitoring systems for telecommunications clients, and several PC-based office automation systems. Sales included SUN and PC hardware and software.

AirTouch Cellular (client) —

Technical project manager and lead engineer for the analysis, design, development, and configuration management of the next generation of AirTouch's cellular network performance monitoring system. This UNIX/C-based system provided reliable collection, distribution, historical database population, and reporting of operational data from target cellular network elements. Duties included travel to and serving as a technical liaison for both domestic and foreign markets. Other duties included maintenance of the various public domain (e.g. GNU) tools used by the entire AirTouch campus.

1/94 to 1/95

### **OSI, Inc ~ Lawndale, California**

Chief Consultant/Secretary —

Part owner of a computer hardware and software consulting services and sales firm. Projects included design and development of UNIX/C-based cellular network monitoring systems for telecommunications clients, design of the next generation of ISO/ITU-based System Management C/C++ toolkit products for a major OSI networking software provider, and several PC-based office automation systems. Sales included SUN and PC hardware and software, and Informix database products.

11/91 to 1/94

### **THE FLOOD GROUP ~ Torrance, California**

Sr. Software Engineer —

Performed software design, programming, and integration on several software projects. Assignments included portions of a cellular network monitoring system, portions of an ISO/ITU-based System Management toolkit, the DNP interface for a SCADA master station, portions of an airport noise monitoring system, device interfaces for a plant noise monitoring system, and portions of a tactical anti-submarine warfare system. All tasks involved UNIX/C programming, primarily within a special system/event-driven paradigm developed by The Flood Group.

Clearance: DOD Secret

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12/89 to 11/91

## TRW, Inc ~ Redondo Beach, California

Member of Technical Staff —

Assigned to various C<sup>3</sup>I defense projects. Duties included design, programming, and formal testing of components in large software systems. Skill areas included security-related software, VMS/Ada, human-machine interfaces using Motif, hardware device control, and network communications software in a UNIX/C environment.

Clearance: DOD Secret

5/87 to 12/89

## CALIFORNIA INSTITUTE of TECHNOLOGY ~ Pasadena, California

System Manager —

Staff member of the Electrical Engineering Department. Duties included computer and research equipment pricing and procurement, system installation, system management, and system and application programming.

8/85 to 10/86

## USC-INFORMATION SCIENCES INSTITUTE (ISI) ~ Marina del Rey, California

Computer Analyst —

Provided *UNIX 4.2bsd* and *VMS/VAXcluster* top level support to an extensive and varied user community. Major projects included development of a computer mail system relay to provide continuity between various commercial mail networks and the DARPA Internet. Information Sciences Institute is a DARPA funded research house affiliated with the University of Southern California.

6/82 to 8/85

## TRW, Inc ~ Redondo Beach, California

Sr. Program Analyst —

Assigned to a very large C<sup>3</sup>I project. Performed system programming, application programming for advanced peripherals, system management, and configuration management on a *VAX-11* running *UNIX 4.2bsd*.

Program Analyst —

Staff member for a computer center that underwent growth from a small departmental resource to a division-wide support facility. Performed system programming, application programming, system management, vendor software package end-use, and user support on several types of processors and graphics equipment. Primary platform was a *VAX-11* running *VMS*.

Clearance: DOD Secret

1/81 to 6/82

## CALIFORNIA INSTITUTE of TECHNOLOGY ~ Pasadena, California

Engineering Assistant —

Assistant to graduate student supervisors for research and departmental support projects in the CALTECH graduate computer science lab. Performed digital project design and construction using several automated, in-house developed tools. Duties also included the purchasing of research equipment and materials.

## INTERNATIONAL EXPERIENCE

1996-7

### SHINSEGI TELECOMMUNICATIONS, Inc ~ Seoul, South Korea

Several extended trips to STL, an equity partner of AirTouch Cellular, Inc., for on-site analysis, development, deployment, and support of a cellular network performance monitoring system.

## EDUCATION

2014 to 2020

### SAN JOSE STATE UNIVERSITY ~ San Jose, California

# JEFFERY A. CAVALLARO

MA, Mathematics.

2010 to 2014

**SAN JOSE STATE UNIVERSITY ~ San Jose, California**

BA, Mathematics  
Summa Cum Laude

2002 to 2010

**OHLONE COLLEGE ~ Fremont, California**

AS, Computer Science  
AS, Physics  
AS, Mathematics  
Valedictorian

1987-88, 1980-81

**CALIFORNIA INSTITUTE of TECHNOLOGY ~ Pasadena, California**

Applied Physics, Engineering & Applied Science

1976 to 1980

**DON BOSCO TECHNICAL INSTITUTE ~ Rosemead, California**

High School diploma plus one year of junior college with four years of intensive study in Electronics Technology.