

David Edwards
Software Engineer
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JOB RELATED SUMMARY:

- Accomplished Software Engineer who holds Bachelor's Degree in Computer Science from California State University.
- Core languages experience: C/C++ 6 years, Python 10 years. Java 6 years.
- 10+ years experience with Git and Subversion repository code version control system and working in Agile / Scrum team project development.
- Project experiences include creating dynamic web/mobile applications using: HTML5, CSS3, SQL/NoSQL, Java, Python, React.js, Node.js, MongoDB/Django REST Web API framework integrating codebases running on UNIX/Linux and Windows platforms. Python backend, API and GUI tool developer. 18+ years Linux OS experience.
- 6 years experience in embedded systems programming microcontrollers.
- Familiar with Matlab in academics to develop Simulink models and observe the output, M-Files, simple GUIs.
- US Navy Veteran 6 years Aviation Electronics Technician Supervisor

EDUCATION

Bachelor of Science in Computer Science, California State University, Los Angeles, CA 2014
Associates of Computer Science, San Diego City College, CA 2009

PROFESSIONAL EXPERIENCE:

UpWork Inc.

July 2023 – Current

Embedded Software Engineer

- Build applications from scratch in Python, PostgreSQL DB, Django REST framework for Web APIs used in client's projects.
- Developing Full Stack projects using Python, Docker, Node.js, and React.js integrating various JavaScript library implementations (React.js, jQuery, D3.js, and Chart.js).
- Design and implement embedded systems, driver updates on GUI interface in ARM embedded systems in C++ on a Freescale i.MX 6 Sabre microprocessor using a custom Linux kernel to program the Freescale board.
- Develop driver and firmware updates for embedded projects running on MSP-430 microprocessor hardware on RTOS.

Qualcomm, San Diego, CA

July 2020 - June 2023

Software Engineer

Embedded Software Content Compliance and Linux Open Source team:

- Reviewed in-house developer code for embedded device updates of modem, GPS, WiFi, Camera, Bluetooth releases for Android and Apple OS running Qualcomm Snapdragon SoCs.
- Develop, maintain, and operate software scanning automated tools using C, C++, Qt, Python, Docker, and Bash scripts.
- Developed and maintained open source compliance review automation systems.
- Built from scratch a front end React.js, Django REST API framework Web API, PostgreSQL DB for to curate and manage SBOM (Software Bill of Materials) report generation by Open Source team.
- Built tools in automation to support testing and verification of large codebases that streamline development processes utilizing C/C++, Python, Docker, Django, Linux/Scripts (Python, Bash, JS), JavaScript, Node.js, React.js, other JS variants.
- Overview embedded software product development lifecycle of Open Source Systems for Android, Linux, Arm, Kernel, GNU.

- Reviewed in-house developer code for open source compliance, supporting engineering teams in managing open source compliance.
- Manage consumption, usage, and distribution of open-source software for Qualcomm.
- Work closely with legal on licensing and compliance issues.
- Manage High-risk open source projects.
- Vetting Android, Embedded, Web Tech, and Chromium software to ensure it adheres to the legal guidelines and for possible open-source license violations.
- Training and guiding teams on how they can be more active contributors to the open-source projects.
- Develop automation tools and processes that help engineers and service teams to meet the licensing requirements in their open-source code.
- Build automation tools to enable and speed up software review processes.
- Work closely with build and integration teams.
- Scanning and analyzing code and linkage between modules.
- Work closely with developers to develop architecture review.
- Systems used: Jira, Gerrit, Git/GitHub, Docker, Django, Microsoft suite of tools.

**ABCO Technology Institute
Inglewood, CA**

August 2019 - Sept 2020

Mobile Application Developer

- Created dynamic, database-driven mobile applications and websites for business-to-business / business-to-consumer userbases using latest technologies including Java and Kotlin with Android Studio to deploy applications on Xamarin, React.js, React Native, Flutter frameworks, while using Dart programming language for the UI components.
- Worked closely with Web marketing and business specialist departments to gather business and technical requirements, and architect working solutions working within financial and resource constraints.
- Projects applied variety of specialties including e-commerce design and search engine optimization.

Saatchi & Saatchi, Torrance, CA

October 2015 - July 2019

Python Developer

- Developed in-house tools and scripts supporting graphic artist team developing HD image rendering animations from CAD data of Toyota model vehicles for display in media advertisements using Python, PyQt, PySide and JavaScript in Maya, Nuke, Shotgun and Photoshop.
- Built a React.js website for internal project management to coordinate multiple projects between our team of designers and codebase maintainers.
- Maintained Python codebase connecting Postman, RabbitMQ, and Deadline hooks/exits for Autodesk Maya, The Foundry Nuke, Shotgun Software, and Thinkbox Deadline.
- Evaluate and test new applications, software, and workflows to improve production.
- Developed an automated ingestion system of build data sheets for annual garage CAD data from Japan in Unreal Engine in which I created augmented virtual reality XR/VR animation projects in C++, showcased on Youtube at [Dr. Kaku's Microcosmic Journey Through Mirai | 360 Video](#).

DIRECTV, El Segundo, CA

April 2015 – June 2015

Software Engineer

- Modifying and creating scripts responsible for talking to pieces of communications and satellite equipment using Java and Groovy programming languages.
- Build front-end UI to monitor and maintain cable TV network traffic using a combination of third-party products and Groovy.

theAudience.com, Los Angeles, CA

October 2014 – January 2015

Data Analyst/Developer

- Built React.js REST API applications to query and present data from MongoDB for internal report generation referred to by our sales data analyst teams.
- Created data collection scripts Python running on cloud Amazon Web Service/AWS EC2 Tier 2 to collect, store, post and maintain social media accounts for Fortune 500 companies providing data analysis and insights of information determined from organic engagement of users on various social media APIs (Vine, Twitter, Facebook).

- Maintained and extended internal APIs servicing collected data over AWS to internal applications.
- Maintained and extended internal AWS cloud services for report generation tools.
- Worked with other development, analytics and sales teams to create client facing reports.

US Navy · Contract, Greater San Diego Area
Aviation Electronic Technician Supervisor

September 2000 - August 2006

- 2nd Class Petty Officer at Coronado Naval Base.
- Westpac Deployment aboard USS Tarawa LHA-1 from 32nd St. Naval Base.

UPS Supply Chain Solutions, Tempe, AZ
Hardware Support Technician

February 1997 – September 2000

- Validation & Verification Testing of Requirements, System and Regression Level Testing, Test Report Preparation, and Software Test Estimation.
- Develop and implement tools to support analysis of UPS desktop shipping tools, support and implement Test Automation features for software test team.
- Troubleshoot escalated technical issues with end-customer on desktop remote support systems.

INTERNSHIPS AND PROJECTS

General Motors, Los Angeles, CA
QT/QML/C++ GUI Developer

January 2014 – June 2014

- Developed board support package (BSP) on GUI interface display systems for an embedded system which runs C++ on a Freescale i.MX 6 Sabre ARM board.
- Performed bring-up for embedded FW on linux kernel to interface C++ CAN signals communication over vehicle's CAN bus system.
- Used a custom Linux kernel to program the Freescale board with C++ to transmit and receive.
- Developed user interface in Qt QML library to create software-based controls that replace radio and climate control mechanical buttons while continually displaying live diagnostic data signals.
- Read and write CAN signals from the car, translating them using a Linux driver, and implemented in QML, C++ to display interactive touch screen controls on the vehicle display console.
- Tested onboard program inside vehicle with live controller area network signals.
- Debugged onboard program through serial cable.
- **Project Website:** <http://csns.calstatela.edu/departments/cs/project/view?id=4556961>

Boeing Company, El Segundo CA
Test Framework Developer

August 2013 – January 2014

- Built a test framework to automate testing for Boeing 702SP operations satellites by developing a system in Java and Python that automates the conversion of TCL/Tk-encoded test cases into Sikuli-readable JSON using the Java ANTLR parser.
- Identified and extracted test cases from TCL/Tk and Perl scripts using ANTLR into an interactive user interface in Java's JGraphX API for test engineers to select test cases, then using Sikuli, a GUI automation tool that was used to replace the test engineer, automate the process on the satellite simulator and produce a log report for later review.
- The final result was successful in optimizing testing, while saving Boeing Company time and money.
- **Project Website:** <http://csns.calstatela.edu/departments/cs/project/view?id=4556960>

PCWerk.com, Playa Vista, CA
Project Developer

January 2013 – June 2013

- Wrote a program that performed data scraping from Yelp's website using Python and Selenium Web driver, and Yelp API.
- Deployed this program on a Hadoop single-node cluster setup on Ubuntu Linux.
- Performed Data Mining and Data Warehousing with MapReduce operations on single-node HDFS on Ubuntu Linux.
- Used Yelp API access for data collection.
- Performed data classification and data massaging from JSON to CSV text.
- Calculated Data analysis on yelp datasets from Yelp API using python while utilizing python extension library pylab.

- Created and presented data visualization using python matplotlib and google maps API Hosted at: <https://github.com/pcwerk>

LICENSES / CERTIFICATIONS

Mobile Application Development certification - (Android/iOS hybrid) Logical Operations Master Mobile Application Developer (MMAD), ABCO Technology Institute. Nov. 2020.

Accredited Project Manager (APRM™) certified. 2019.

OSHA 30 licensed Oct. 2019.

FCC (Federal Communications License) with GROL endorsement. 2003.

Advanced Fiber Optic Installation Technician License. 2003.