

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 integrated codebases running on UNIX/Linux and Windows platforms. Python backend, API and GUI tool developer. 18+ years Linux OS experience.
- 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.com

July 2023 – Current

Embedded Software Engineer

- 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 applications in assembly, C/C++ for embedded projects running on MSP-430 microprocessor hardware on RTOS.
- Develop applications from scratch in React.js, Node JS projects for client's project.

Qualcomm, San Diego, CA

July 2020 - June 2023

Embedded Software Engineer

Embedded Software Content Compliance and Linux Open Source team:

- Developed, debugged, and deployed embedded C/C++ code in firmware, device drivers performing bring-up for display systems on Qualcomm SoCs.
- Provide board support package (BSP) in Bluetooth, GPS, Qualcomm's proprietary modem, camera and UI interface in Android RTOS for Qualcomm Snapdragon SoC processor on device.
- Developed firmware device driver support for Daimler AG/Mercedes-Benz on Qualcomm's SnapDragon SoC running GPS, Bluetooth devices installed in Mercedes-Benz electric vehicles with automated navigation capability.
- Developed C++ embedded code communicating Tx/Rx CAN signals over the vehicle's CAN bus.
- Developed a React.js Docker web REST API using Django backend for Open Source team to curate and manage SBOM (Software Bill of Materials) reports.
- Built automation tools running in Amazon AWS EC2 tiers to streamline development processes utilizing C/C++, Python, Docker, Django, Linux/Scripts (Python, Bash, JS), JavaScript, Node.js, React.js, other JS variants.
- Develop, maintain, and operate software scanning automated tools using C/C++, Python, Docker, Bash scripts.
- 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, developed and maintained open source compliance review automation systems, supporting engineering teams in managing open source compliance.
- 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 (SEO).

Saatchi & Saatchi, Torrance, CA

October 2015 - July 2019

Python Developer

- Developed in-house tools and scripts 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 to Deadline hooks and 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, Marina Del Ray, 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 a React.js REST API application to query and present data from MongoDB for internal report generation referred to by our sales data analyst teams.
- Created data collection scripts in Python 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 (e.g. Vine, Twitter, Facebook).
- Maintained and extended internal APIs servicing collected data to other applications.
- Maintained and extended internal report generation tools.
- Worked with other development, analytics and sales teams to create client facing reports.

US Navy · Contract, Greater San Diego Area

September 2000 - August 2006

Aviation Electronic Technician Supervisor

- 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

February 1997 – September 2000

Hardware Support Technician

- 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 Sponsored EcoCar2 Competition, Los Angeles, CA

January 2014 – June 2014

QT/QML/C++ GUI Developer

- 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/department/cs/project/view?id=4556961>

Boeing Company, El Segundo CA

August 2013 – January 2014

Test Framework Developer

- 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/department/cs/project/view?id=4556960>

PCWerk.com, Playa Vista, CA

January 2013 – June 2013

Project Developer

- 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.