GEOFFREY BIAN

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TECHNICAL SKILLS

Programming & Frameworks: Java, Python, C, C++, JavaScript, React.js, Node.js, GoogleTest, JUnit, GDB
Systems & Hardware: AWS, TCP/IP, CAN, LIN, ARM, Raspberry Pi, Altium, SystemVerilog
Tools & Technologies: Linux (Ubuntu), Git, Docker, CI/CD, VS Code, MATLAB, Excel, Jenkins, Agile Methodologies

TECHNICAL EXPERIENCE

Software Engineer Intern May 2024 – December 2024
Rivian Automotive *Vancouver, BC*

- Developed customer-facing Body Control features in *C* ensuring adherence to system requirements, while implementing rigorous testing procedures.
- Deployed unit tests with *GoogleTest* and automated *Python* testing scripts for *Hardware-in-the-Loop* (*HiL*) systems to ensure comprehensive and efficient testing of vehicle software, and satisfy *ASIL A/B* code coverage metrics.
- Performed in-vehicle systems integration and utilized *CANape* (*Vector*) tools to analyze *CAN* signals and diagnose vehicle's firmware-level failures.
- Collaborated with cross-functional engineering teams to integrate software key performance metrics (KPI) to collect vehicle data upholding functional safety standards and assisting in software bug triaging.

Hardware Designer September 2022 – June 2024
UBC Formula Electric *Vancouver, BC*

- Enabled firmware testing and validation of PCB boards by leveraging *ChimeraTool* and *Python* scripts.
- Designed and validated the *Tractive System Active Light* PCB board with *Altium* ensuring compliance with competition standards, enhancing functionality, and prioritizing driver safety.
- Propelled the development and construction of the electric vehicle, *Thruna*, placing 2nd in battery efficiency and 21st overall out of 69 teams in the 2023 *Formula SAE Electric* competition.

Mechanical Engineering Intern May 2023 – August 2023
Acuren *Richmond, BC*

- Examined datasets of over 5000 points with *Excel* and *Ansys Mechanical* to produce comprehensive technical reports that summarize test results and observations, while providing recommendations to customers.
- Performed mechanical tests including tensile and impact tests, utilizing industry-standard (*ASTM-A370*) equipment and procedures within *Acuren*'s accredited engineering and metallurgical laboratory.

TECHNICAL PROJECTS

Pinpoint | *Java, JavaScript, Spring Boot, React, MongoDB, Git* January 2024

- Facilitated the development of *PinPoint*, a map-based social media platform allowing users to collaborate through a map-based user interface at *nwHacks* 2024 24-hour hackathon.

Internet of Things Server | *Java, Threads, Git, Server Socket* November 2023 - December 2023

- Developed a robust *IoT* server to provide clients with access to toggle services and prediction functionalities for actuators and sensors.
- Identified and resolved complex multi-threading and system integration issues to ensure server's reliability.

OTHER EXPERIENCE

Ice Hockey Referee | *BC Hockey* January 2024 – Present

- Managed on-ice conflicts, while ensuring impartiality to maintain the integrity of the game and uphold sportsmanship standards.

Content Creator | *West Richmond Community Center* June 2021 – August 2022

- Leveraged social and networking platforms including Instagram to promote the camp and establish connections with patrons, expanding outreach and engagement with a 22% growth over summer 2021.

EDUCATION

University of British Columbia Sep. 2022 – May 2027
Bachelor of Applied Science, Computer Engineering, CGPA 4.1 (87.2%) *Vancouver, BC*

- *Relevant Courses*: Software Construction, Computing Systems, Data Structures & Algorithms, Circuit Analysis