Ahnaf Shahriar

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EDUCATION

University of Waterloo — Waterloo, ON
Bachelor of Applied Science in Computer Engineering — *Sept. 2021 – May 2026*

- Recipient of Richard & Elizabeth Madter Entrance Scholarship and President's Scholarship of Distinction
- GPA: 3.7
- **Relevant Courses**: Algorithms and Data Structures, Digital Computers, Digital Circuits and Systems.

EXPERIENCE

Software Engineering Intern — Sept. 2022 – Dec. 2022
Synapse Product Development — *Seattle, WA*

- Leveraged **Zephyr RTOS** to create an **NRF52 BLE Prototype.**
- Developed **Python APIs** for lab testing equipment(**Agilent, Keysight, NI, Tektronik**)
- **Automated** various testing and in house procedures using **Python and bash scripts.**
- Designed Docker containers for **Gitlab pipelines** to complete test and build jobs.

Firmware Developer — Jan. 2022 – April 2022
Ford Motor Company of Canada — *Remote*

- Improved **Jenkins CI/CD** pipelines to achieve **unit testing automation** using **Python** for Linux server.
- Lead developer for **Unity/Cmock Test framework** optimization for unit testing, achieving up to **30% faster** runtime while using **50%** fewer test cases.
- Tested logging and interrupt algorithms and debugged on hardware test benches.
- Debugged Embedded C code for MISRA compliances using **Polyspace**.

PROJECTS

Blog | *Django, NextJS, Google Analytics, Github Actions*

- Designed using the Django web framework to create a **RESTful API** for manage requests and database models   .
- Set up **Google Analytics** feedback on the website to provide real-time rich data on usage
- Configured **CI/CD pipelines** on Github Actions to automate building and deployment to hosting service
- Integrated **Disqus** Static Page Comment Section to **limit data retrievals** from server for optimal page load times.

SEER | *Javascript, ElectronJS, NodeJS, HTML/CSS*

- Utilized the **Yahoo Finance API** JS library to apply a moving average trading strategy for stocks
- Leveraged ElectronJS to create a seamless **Cross-Platform App** running on Chromium
- Developed a Bot automated trading service by connecting to **TradingView API**

Game Of Life | *C++, Python, OpenGL API, Git*

- Implemented all stages of the **Graphics pipeline** to achieve **2+ million polygons** rendering efficiently via triangles.
- Abstracted complex Graphics API code into simpler **game engine API** classes(Shaders, Vertex, Renderer, etc) for more practical **development and debugging.**
- Designed my own testing assert macros to debug Graphics errors in **VS Studio/Xcode Debugger**

TECHNICAL SKILLS

Languages: Python, C/C++, SQL, JavaScript, HTML/CSS, Perl, shell scripting
Frameworks:Node.js, JQuery, Django, Flask, OpenCV, Numpy, SSG tools(Jekyll, Hugo)
Developer Tools: Git, Ansible, OpenSSL, Docker/K8s, Jenkins, Github Actions, VS Code
Libraries: pandas, NumPy, Matplotlib, pyTorch, TensorFlow