

# Ahnaf Shahriar

[Email](#) | [LinkedIn](#) | [Github](#) |

## EDUCATION

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### University of Waterloo

Waterloo, ON

*Bachelor of Applied Science in Computer Engineering*

*Sept. 2021 – Apr. 2026*

- Recipient of Richard & Elizabeth Madter Entrance Scholarship and President's Scholarship of Distinction
- **Relevant Courses:** Algorithms and Data Structures II, Computer Networks, , Systems Programming and Concurrency, Compilers

## EXPERIENCE

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### IC Design and Verification Intern

May 2023 – Aug. 2023, Jan. 2024 – May 2024

*NXP Semiconductors Canada*

*Kanata, ON*

- **IP Design:** Designed multiple IP blocks NXP's flagship dataplane processing chips.
- **Timing Analysis:** Spearheaded critical path improvements in IP block to increase speed by 50%.
- **Functional Testing:** Designed brand new End-to-End functional tests in simulating traffic for IP.
- **Unit Test Planning:** Created Simulation scenarios for testing High speed Dataplane Processing features.

### Software Engineering Intern

Sept. 2022 – Dec. 2022

*Synapse Product Development*

*Seattle, WA*

- **Prototyping:** Leveraged Zephyr RTOS to create a proof of concept on *NRF52 BLE* device.
- **Python APIs:** Developed company specific lab automation software for equipment from Agilent, Keysight, NI, Tektronik.
- **Automation:** Streamlined testing and in house procedures using Python and Bash.
- **Containerization:** Docker containers for Gitlab pipelines to complete test and build jobs.

### Firmware Developer

Jan. 2022 – April 2022

*Ford Motor Company of Canada*

*Remote*

- **Unity/Cmock Test framework:** Lead developer of optimization for unit testing, achieving up to 30% faster runtime while using 50% less manually written test cases.
- **Automation:** Improved *Jenkins* CI/CD pipelines to support unit testing automating using Python for Linux server.
- **Embedded Trace Debugging:** Tested logging and interrupt algorithms and debugged on hardware test benches through CAN and Serial. Used Static Analysis tools such as Sonarqube.

## PROJECTS

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### FindPng | C

- A **multithreaded** webscraper built with pthread library utilizing mutual exclusion primitives from Linux.
- Analyzes webpage contents using **Breadth First Search** for sublinks found in pages with duplicate analysis.
- Implements **Producer-Consumer** design to parallelly analyze file metadata to identify format.

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

- Utilized the **Yahoo Finance API** JS library and created stock analysis app
- Leveraged ElectronJS to create a seamless **Cross-Platform App** running on Chromium
- Developed a Bot automated trading service by connecting to **TradingView API**

### Home Server | Rust, Linux, Raspberry pi

- A light multi-threaded webserver using **Sockets** made on Pi 4 for file serving and website hosting.
- Implements **Cloudflare Tunneling** for global internet encryption and protection
- Designed Secure Login for Remote development environment in Linux.

## TECHNICAL SKILLS

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**Languages:** C/C++, Python, Rust, Java, Javascript, SQL, Bash and shell scripting, ASM, Matlab

**Frameworks:** LLVM, OpenGL, ROCm, Node Js, ElectronJS

**Libraries:** pandas, NumPy, Matplotlib, pyTorch