

PATHUM DANTHANARAYANA

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EDUCATION

Carleton University
BEng, Software Engineering
Ottawa, ON
Sept 2020 – Apr 2025

9.98/12.0 CGPA (A-)

SKILLS

LANGUAGES

- Python
- Java
- C
- Tcl
- JavaScript
- HTML/CSS

TOOLS

- Kali Linux
- Ubuntu
- Git
- Wireshark
- Aircrack-ng
- Nmap
- IntelliJ IDEA
- PyCharm
- VS Code
- Adobe XD
- Figma

TECHNOLOGIES

- Flask
- Django
- PostgreSQL
- Oracle Database
- QGIS
- Microsoft Azure

EXPERIENCE

Nokia Sept 2023 – Dec 2023

Service Router Platform Test Developer

- Developed automated tests to validate high-precision time and phase synchronization technologies, such as **PTP** and **SyncE**, on service routers in a **Linux**-based regression environment using **Tcl**
- Monitored automated regression tests on a daily basis to ensure newly written code did not break any existing PTP/SyncE functionality
- Optimized, eliminated redundancy, and improved coverage of existing PTP/SyncE tests, resulting in improved testing efficiency
- Performed configuration of high-capacity service routers using various network protocols to route Terabits per second of IP traffic
- Conducted thorough investigations and generated detailed reports on bugs, and worked 1-on-1 with software developers to effectively address them
- Provided regular updates on progress by attending team meetings and creating weekly status reports

Royal Canadian Mounted Police – Technical Investigations Jan 2023 – Aug 2023

Wireless Systems Engineer

- Researched and developed protocols, algorithms, and software for Wi-Fi, Bluetooth, and client-server applications using **Kali Linux**, **Python**, and **C**
- Developed new methods for discovering wireless devices by conducting research on communication and network management protocols using **Wireshark**, **Aircrack-ng**, and **Nmap**
- Determined how certain Bluetooth LE devices communicate by conducting research on BLE protocols and performing packet analysis using commercial Bluetooth analysis systems
- Allowed for more efficient use of a wireless investigation tool by developing a modern GUI and web server application using **JavaScript** and **Flask**
- Performed testing and analysis of various GNSS technologies with a focus on **GPS** and **GLONASS** constellations
- Actively engaged with clients and gave regular updates to managers by conducting demos, presentations, and writing detailed documentation for developed tools

Fisheries and Oceans Canada (DFO) – CHS Division Jun 2022 – Sept 2022

Software Developer

- Enabled advanced querying and 5x faster search times for a cloud storage explorer application by re-developing the legacy application with **Python**, Microsoft Azure Python SDK, **PostgreSQL**, **QGIS** and multithreading techniques
- Improved general performance, UI/UX, functionality, and features of a product release application by re-developing the legacy application using **Python** and **QGIS**