[Email icon - Free download on Iconfinder](mailto:zm2zaman@uwaterloo.ca)

**TECHNICAL SKILLS**

ZAHIN M. ZAMAN

[](https://zahin-zaman.vercel.app/)[](https://devpost.com/alvii147)[LinkedIn icon in Windows Metro Style](https://www.linkedin.com/in/zahin-zaman/)[](https://github.com/alvii147)Phone icon - Free download on Iconfinder

**EXPERIENCE**

**Full-Stack Developer**

*Nokia | May 2021 – August 2021*

* Developed & managed authentication security, community articles page and voucher redemption system for [Nokia Network Developer Portal](https://network.developer.nokia.com) on **Django** server with an **Azure MySQL** database
* Secured backend using **Django REST framework** API authentication, cross site scripting protection and honeypot setups
* Improved test coverage by **6%** using Python **unittest** module and installed **Gitlab CI** pipeline for automated testing of forms, models, and REST API endpoints
* Designed responsive frontend in **Jinja2** templates by utilizing **jQuery** and **Bootstrap**

**Open-Source Software Developer**

*codePrentice | Sept 2020 – Present*

* Expanded Python multiparty-computation library, **MP-SPDZ,** to support **Convolutional Neural Networks,** including **SqueezeNet, ResNet** and **DenseNet** models
* Implemented image processing operations using **Pillow** and **SciPy**
* Composed [comprehensive tutorial](https://stumpy.readthedocs.io/en/latest/Tutorial_Annotation_Vectors.html) based on Matrix Profile research paper for Python time series analysis library, **STUMPY**

**Display Verification Engineer**

*Qualcomm | Jan 2020 – May 2020*

* Engineered **SystemVerilog** assertions and **C++** simulation tests to verify display processor design
* Attained **20%** increase in functional coverages by debugging waveform using Synopsys Verdi tool
* Automated formal verification using **Perl** scripting to extract design hierarchy and formulate assertions
* Web-scraped design database and employed **PyQt5** to build interactive GUI for managing hardware registers

**Software Developer**

*Wind River Systems | Sept 2020 – Dec 2020*

* Rectified multi-threading and memory-based defects for VxWorks RTOS and Helix Virtualization Platform
* Debugged and reconfigured source code in **C** and utilized inline **Assembly** to write thread-safe functions
* Developed interactive program in **PyQt5** that assists in writing git commit messages, and verifies status of Jira issues and code reviews
* Formulated git hook script to detect and block commits on restricted files and identify file author

**University of Waterloo**

*B.A.Sc. in Electrical Engineering, 3B | Sept 2018 – May 2023*

* **Term Dean’s Honour List,** for outstanding academic performance
* **Artificial Intelligence Degree Specialization**

**EDUCATION**

**EduSource**

***HackTheU 2020 – Best Use of Google Cloud***

***Hackrithmitic 2020 – Best Use of Google Cloud***

* Web application for enriched remote education, crowdsourcing course materials and scientific equation recognition
* Constructed full-fledged **Flask** application in **Python** with **HTML, CSS** and **Bootstrap**
* Employed **Google Cloud Vision** tool to implement scientific equation recognition from handwriting
* Established foreign key relations between ORM objects using **Flask SQLAlchemy** and **SQLite3**

**Hachiko's Journal**

***HackRU 2020 – 1st Place Health Hack***

* AI-based digital therapeutic journal writing application for mental health patients with interactive virtual assistant
* Performed sentiment analysis using **Google Cloud Language** to provide real-time feedback and compliments
* Developed desktop application with stylish frontend and interactive virtual assistant using **PyQt5**

**cram.ai**

***WinterHacklympics 2020 – Best Use of Google Cloud***

* Utilized **YouTube Transcript API** to extract lecture video transcript and applied pre-trained **RNN** to add punctuation
* Incorporated Python **NLTK** library and **Google Cloud Language** to summarize key points from lecture videos
* Generated flashcards with questions and answers in a user-friendly frontend served by a **Flask** backend hosted on **Heroku**

**Programming:** Python, C++, Javascript, HTML, CSS, Bash

**Tools & Frameworks:** Django, Flask, React.js, React Native, Google Cloud, Heroku, Docker, Firebase, MySQL, TensorFlow, Keras, OpenCV, pandas, PyQt5

**pupil**

***HackDuke 2020 – Wolfram Award***

* **Computer vision** application **in OpenCV** that detects pupil movement and develops eye-tracking communication for Cerebral Palsy patients
* Applied **Haar Cascade classifiers, blob detection** and **morphological transformations** to process images in real-time
* Utilized **multi-state sigmoid activation function** to calibrate pupil coordinates

**PROJECTS**

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