Alamgir Khan

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Skills

Languages Python, Java, JavaScript, HTML, CSS, C, SQL, R, Gherkin, VB.NET

Technologies Node, React, FastAPI, Spring, Django, MongoDB, MySQL, Cucumber, Cypress, AWS, Git/GitLab, Jira

Experience

Security Compass
Toronto, Canada

SOFTWARE ENGINEER INTERN
May. 2022 - Aug. 2022

- Expanding functionality of a diagrammatic threat modelling tool, used by 80% of clients, with **JavaScript**, **React**, **Redux** and **Cypress**.
- Implemented a sorting algorithm on a **Django** API endpoint in **Python** per request of a $1,000,000 client and added **behave** API tests using **Gherkin** and **Cucumber**. Featured in the Employee Spotlight of the Month.
- Overhauled diagramming state management using **React**'s useReducers to manage complex state changes and reduce code duplication.

Senso.ai
Toronto, Canada

SOFTWARE ENGINEER INTERN
Sep. 2021 - Dec. 2021

- Designed and hosted an MVP on **AWS** to transfer the company's AI-powered home finance solutions over to the auto industry. Recognized as the most innovative solution amongst 5 other designs by the CTO.
- Coded the backend of the project's recommendation system using **Java** and **Spring** to help partnered banks secure 20% more auto loans.
- Modeled and monitored the project's **MySQL** database through **MySQL Workbench**. Wrote code for all CRUD operations using **JDBC**.

Navikenz
Cranbury, USA

SOFTWARE ENGINEER INTERN
June. 2021 - Sep. 2021

- Created an optimization tool in **Python** that reduced runtime from days to real-time. Wrote unit tests with 90% code coverage.
- Developed a RESTful web service using **FastAPI** in an agile team of 5 to handle resource distribution. Received high praise from CEO.
- Devised a UML data model and database schema for the project. Implemented all CRUD operations in **MongoDB** using **PyMongo**.

Projects

A* Pathfinding 🔗
Mar. 2021 - Apr. 2021

- Developed a node-based approach of the A* pathfinding algorithm using **Python** and **Pygame**.
- Coded additional functionality for users to choose from 3 search heuristics and variable display configurations.

Climate Change Simulation 🔗
Nov. 2020 - Dec. 2020

- Designed an algorithm using **Python** and **Pillow** to visualize a color map of climate change effects predicted by the BCCAQv2 model.
- Programmed a pop-up line and scatter graph and styled table using **Plotly** to display 2 quantitative measures of the model's readings.

Leadership

Technology Leadership Initiative

COHORT 4
Sep. 2021 - Apr. 2024

- 1 of 23 out of ∼1000 undergraduate UofT CS students admitted to the program on the basis of grit, curiosity, agility, and academic merit.

UofT Blueprint

VICE-PRESIDENT PROJECTS
Apr. 2022 - Apr. 2023

- Recruit, onboard, and manage 3 development teams in building free and open-source software for social good.

UofT Computer Science Student Union

DIRECTOR OF EXTERNAL RELATIONS
Oct. 2021 - Apr. 2022

- Arranged 6 career-oriented events by developing/maintaining strategic partnerships with industry experts (Amazon, Microsoft, etc.).

Education

University of Toronto
Toronto, Canada

HONOURS B.SC. COMPUTER SCIENCE AND COMPUTATIONAL COGNITION
Sep. 2020 - Apr. 2024

- GPA: 3.41/4.0
- Relevant Coursework: Software Design, Data Structures & Algorithms, Software Tools & Systems Programming, Computer Organization

Honors

2018 **Outstanding Cambridge Learners Award**, Cambridge Assessment International Education