First Last

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FDUCATION

BSc. Honours Computer Science With Software Engineering Specialization

Windsor, ON | Jun 2021

University of Windsor

Teacher Assistant (TA): World Wide Web Information Systems Development

WORK EXPERIENCE

AMAZON | Software Development Engineer Intern

Toronto, ON | May 2020 - Aug 2020

- Designed and implemented a dashboard using **React** and **TypeScript** to visualize data stored in **DynamoDB**, decreasing time to understand delivery driver work sessions by over 10 times.
- Ensured only authorized employees have access to the application by creating an **AWS Lambda@Edge** function to intercept and sign valid requests.
- Devised and deployed the infrastructure in TypeScript through **AWS CDK**, then created efficient algorithms to process data from a custom **REST API**, so it could scale to handle millions of deliveries.
- Setup a CI/CD pipeline and exceeded requirements in each stage, which lead to the application being pushed to production.

UNIVERSITY OF WINDSOR | RESEARCH ASSISTANT (RA)

Windsor, ON | Feb 2020 - May 2020

- Developed a Personal Health Record (PHR) system in **Spring** based on the theoretical model outlined in Mitu Kumar's thesis.
- Applied the mCP-ABE encryption scheme using the JPBC library, so patients have fine-grained access control over their health records with the ability to instantly revoke access.

JOATU | SOFTWARE ENGINEER INTERN

Montreal, QC | Dec 2018 - May 2019

- Rewrote legacy **Django code** in **Ruby in Rails** and refactored it to make the system more extensible.
- Created **UML** diagrams and documented where features were implemented, to make the codebase more maintainable.

PROJECTS

AUTOMATED SPEAR-PHISHER ✓

PYTHON, PySpark, Selenium, Apache, NLP, Big Data

A security research tool to send targeted spam messages on either Facebook or Twitter. The program analyzes the feed of its target to increase the effectiveness of the messages.

IMAGE REPOSITORY □

JAVA, PHP, REACT, TYPESCRIPT, MAVEN, GCP, MYSQL

A full-stack image repository, where users can store their files. Created a GCP cloud function to implement CP-ABE encryption and used it to ensure files are secure at rest.

BIOMETRIC DYNAMIC KEYSTROKE SPOOFER 🖸 PYTHON, OBJECT-ORIENTED DESIGN, CYBERSECURITY

A program that authenticates users based on their typing patterns. And a spoofer that uses the genetic algorithm to mimic the user's typing pattern.

DISTRIBUTED KEY-VALUE STORE JAVA, DISTRIBUTED SYSTEM, COMPUTER NETWORKS, CONCURRENCY

A distributed key-value store which automatically replicates data in the background while the user manages their data. Implemented a custom P2P protocol to maximize fault tolerance and scalability.

WAR OF WEEBLES ☑

C#, Unity, Concurrency, Artificial Intelligence

A capture-the-flag-styled shooting game composed of AI-controlled players. The agents change their goals based on various factors, such as their health, current weapon, their personality and what they see.

SKILLS

Languages: Java, C++, Python, C#, PHP, Prolog, Bash, C, Racket, SQL **Web Development:** React, JavaScript, TypeScript, HTML/CSS

Technology: Git, AWS, GCP, Azure, Docker, Unity, Apache, LTFX, MongoDB, DynamoDB, Neo4j