ARUNAB SINGH

☎ (778) 917-5748   ✉ arunabsandhu07@gmail.com   in /in/arunab-singh-1a0603205/
🌐 arunabsingh.netlify.app   ○ ArunabSingh

EDUCATION

British Columbia Institute of Technology   Grad. May 2023
Diploma, Computer Science (Computer Systems Technology); Co-op Student
- **Clubs**: Senior Student Mentor for Computing Club; Vice-President for CodingForAll Club

WORK EXPERIENCE

British Columbia Institute of Technology   Jan 2023 – Present
Research Assistant   *Vancouver, BC*
- Built Neural Networks in **Python** with **PyTorch** that detect Mobile Malware with 96.4% accuracy using features extracted from reverse engineered **Android** App APKs.
- Wrote multi-threaded **Python Scripts** using **Requests** and **multiprocessing** module to download APKs concurrently, resulting in fast download speeds.
- Achieved 10x reduction in processing times by writing **Java** recursive methods for extracting essential features from binary manifest and Dex files within Android APKs.
- Wrote comprehensive **Junit** unit tests for feature extraction methods, ensuring above 90% code coverage.

TRIUMF   Apr 2023–May2023
Software Engineer | BCIT Practicum   *Vancouver, BC*
- Optimized **MySQL** DB query response by 50% through indexing key columns and writing subqueries.
- Reduced deployment time by 80% through the implementation of **Docker** containers in a **Linux** environment.
- Utilized **ROOT**'s **C++** interpreter to efficiently handle large datasets, perform advanced DB operations, and generate data visualization charts.

Realtor.com   Jan 2022–Aug 2022
Software Engineer Intern   *Vancouver, BC*
- Developed testing environments by utilizing **Jenkins**, **Docker** and **Shell Scripts** that ran automated integration tests with every PR and QA build.
- Successfully integrated testing environments in over 10 microservices, resulting in a reduction of bugs and crashes in both production and QA environments by 40%.
- Implemented **AWS Lambdas** for storing and querying data in **DynamoDB**, delivering a cost-effective and scalable solution for efficient customer registration.
- Automated recurring tasks in the onboarding of 30,000+ users by leveraging **AWS Serverless** tools (Lambda, Step Function and API Gateway).
- Created modular Page Object Models in **Typescript** using **Playwright** and utilized them in writing UI integration tests with over 85% code coverage.
- Achieved runner-up out of 80 submissions in the company's annual hackathon by implementing a video chat feature using **React** and **Twilio**.

PROJECTS

NBA Predictor / *Github*
- Developed NBA winner prediction model with 65% accuracy using **Python** and **Scikit-Learn**.
- Utilized **AWS SageMaker** for Data Analysis and Visualization enabling me to effectively select improved features.
- Employed **Machine Learning** techniques (Bagging, Ensemble, Stacking) to create a highly accurate model.

CampMonk / *Github* / *Website*
- Created a campground review platform with **HTML, CSS, JavaScript** and **NodeJS**.
- Developed a robust **REST** API using **Express** and implemented CRUD operations with **MongoDB**.

TECHNICAL SKILLS

Languages	Java, Python, JavaScript, Typescript, C/C++, MySQL, MongoDB
Web Development	Django, React, Node.js, Express.js, REST, GraphQL
Tools/Technologies	Linux, AWS, Jenkins, Docker, Git, Splunk, Split.io
Testing/Debugging	Jest, Mocha, JUnit, Playwright, Selenium, Postman