Lawrence Tang

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EDUCATION

BSc. Combined Major In Computer Science and Statistics Vancouver, BC | Expected Grad May 2024
University of British Columbia
Dean's Hounor List: (Cumulative GPA: 4.00)·(Relative (CS, Stats, Math) GPA: 4.00)
Key CPSC Coursework: 317: Internet Computing, 320: Intermediate Algorithm Design, 313: Hardware & OS
Key Stats/Math Coursework: S-302: Probability, S-305: Statistical Inference, M-307: Applied Linear Algebra

WORK EXPERIENCE

AWS | Software Development Engineer Intern Vancouver, BC | May 2023 – July 2023

- Designed and implemented new features for an **internal auditing platform** with **Java** and **CDK (TypeScript)**, presented both **high-** and **low-level design documentations**
- Enabled **real-time auditing processes** by modifying **OpenSearch Connector** from **Athena Federated Query** (open-source) to onboard **OpenSearch instance** containing **business workflow events**. Allowing the platform to support **time-sensitive business usecases** from customers.
- Enhanced the platform's capabilities by integrating **Athena User Defined Functions**, **empowering service teams** to implement advanced logic in code instead of SQL, and **enabling API calls** during **auditing processes**.
- **Presented and demonstrated** the project to my organization at the end of the internship

DILIGENT | Software Developer Intern Vancouver, BC | Jan 2022 – Aug 2022

- Worked with Machine Learning team to integrate **Natural Language Processing** assistant on company platform
- Built, tested, and deployed service using **Docker** and **Terraform** on **AWS** as part of CI/CD pipeline
- Researched and constructed working data and model building pipeline POCs using **AWS Glue & Step Functions**, which enabled team to determine best approaches according to current goals
- Developed automated ML pipeline using **AWS SageMaker** - resulting in **50% faster** iterations of model training
- Through domain specific training, the now deployed model has **240% increase in recall** over baseline model
- Performed Data extraction, EDA, and Data preprocessing (via **Pandas** & **NLTK**) on domain specific data
- Selected model candidates for training by researching various pre-trained models on **Huggingface**

PROJECTS

LETMEINUBC AWS CDK (Lambda, API Gateway, DynamoDB, S3, Cognito), React, Docker
A full stack web scraping application that continuously monitors seating availability and notifies UBC students of openings in popular courses.

- Refactored from container hosting to **serverless** infrastructure and **distributed** system design for minimal operating costs (from $45 per month to $0)
- Utilized **React** and **Tailwind** CSS as the **Lead developer** of the front-end
- Deployed front-end and integrated **API Gateway** with **Cognito User Pool** for authorization to ensure secured access

MNIST DIGIT CLASSIFIER Keras, TensorFlow, Python, Numpy, anaconda
A program that accurately classifies user-drawn-digits with a **Convolutional Neural Network** model, which was built from scratch and trained on the MNIST Digit dataset via **TensorFlow**.

- Utilized **Numpy** to normalize user-drawn-digits for model input

SKILLS

Languages: Java, Python, SQL
Web Development: React, JavaScript, TypeScript, NodeJS, HTML/CSS, Tailwind
Technology: Git, AWS (CDK, Lambda, Athena), Azure, Docker