




Alex Lee Tobias

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EDUCATION

University of Toronto

B.S. Computer Science, 3.96/4.0 GPA (Dean's List)

Expected May 2023

Toronto, ON

WORK EXPERIENCE

Akuna Capital

Software Development Intern

Jun 2022 – Aug 2022

Chicago, IL

- Worked on the firm's trade activity monitoring and post-trade evaluation systems.

Asana

Software Engineering Intern

Jan 2022 – Apr 2022

San Francisco, CA

- Developed Kubernetes infra tooling for pre-provisioning EKS resources in new service deployments, speeding up staging launches by up to 45% and saving 1100+ hours/year of development iteration time.

University of Pennsylvania

Research Intern

May 2021 – Present

Remote

- Received a fellowship from Schmidt Futures and The Learning Agency Lab to pursue research at the University of Pennsylvania Center for Learning Analytics.
- Worked on tools for applying machine learning on MOOC data to predict and model learner behavior.

FlyFarm Agritech

Software Engineering Intern

May 2020 – Jul 2020

Hong Kong

- Designed and deployed an edge device IoT network for real-time sensor data aggregation & reporting.
- Results included a 140% improvement in atmospheric stability and 200+ hours of operational labor saved.

Bionik Laboratories, Inc.

Software Engineering Intern

Jan 2019 – Apr 2019

Toronto, ON

- Developed embedded RTOS software on ST Microcontrollers in C for an assisted rehabilitation robotic system.
- Increased system graphics cost-efficiency by over 55% by analysing and automating rendering tests.

PROJECTS

SideWindow | TypeScript, React, Socket.io

May 2021

- Created an original VS Code extension to live-share editor files to a browser client, with 150+ installs in two months.
- View extension store page with demonstration [here](#).

Tweet Sentiment Predictor | JavaScript, WebAssembly, Python

Apr 2021

- Trained a sentiment analysis model on the "Sentiment140" dataset of 1.6 million tweets using FastText.
- Created a browser-based tool using said model to perform sentiment classification on user-supplied text.
- Link to demo [here](#), documentation [here](#).

Part-of-Speech Tagger | Python, NumPy

Mar 2021

- Implemented a grammatical tagger utilizing Hidden Markov Models to encode observed sequential probabilities.
- Tagger can be trained on labelled texts to generate models capable of tagging unseen texts with 90% accuracy.

RELEVANT COURSEWORK

- | | | | |
|---------------------------|----------------------|-----------------------|-------------------------|
| • Artificial Intelligence | • Algorithm Analysis | • Databases | • Programming Languages |
| • Operating Systems | • Statistics | • Systems Programming | • Computer Architecture |

SKILLS & INTERESTS

Languages: Python, C, C++, JavaScript, TypeScript, Haskell, Lisp/Racket, Java

Technologies: Linux, git, AWS, Kubernetes, React, Flask, Express, MongoDB, PostgreSQL, MySQL

Technical Interests: Artificial Intelligence, Linux Kernel, Functional Programming

Personal Interests: Travel, Improv Comedy, Mixology, Mountain Biking