Andy Tran

+1 587-920-6558 | anhquoctran006@gmail.com | linkedin.com/in/andy | github.com/andy

EDUCATION

University of Alberta Edmonton, AB
Bachelor of Science with Honors in Computing Science *September 2021 – May 2025*
- GPA: 3.9.
- *Relevant Coursework*: Parallel & Distributed Systems; Web Applications & Architecture; Software Engineering; Software Quality; Databases; Networks; Operating Systems; Algorithms; Computer Architecture & Organization.

EXPERIENCE

IT Solutions Developer Intern Calgary, AB
Ovintiv Inc. *May 2024 – August 2024*
- Built a large language model for the company's IT Knowledge Bases using **Azure OpenAI** and **Azure AI Search**, decreasing the time needed to find relevant information across 4500+ articles by 40%.
- Developed a high-performance data pipeline with **Python** and **FastAPI** to automate synchronization between a **ServiceNow** instance and an **Azure Blob Storage**, reducing manual entry time by 90%.
- Automated over 20 workflows in the ServiceNow IT Portal, saving 100+ hours of manual work per month.

Undergraduate Teaching Assistant Edmonton, AB
University of Alberta *September 2023 – April 2024*
- Guided over 1000 students in CMPUT 201 and CMPUT 204 in mastering **data structures**, **algorithms**, and **C programming** fundamentals.
- Collaborated with professors to develop and deliver effective teaching materials, leading to a 10% increase in course satisfaction.
- Evaluated assignments and exams, offering constructive feedback to enhance students' coding abilities and algorithmic understanding.

PROJECTS

Go Microservices | *Go, gRPC, Docker, Kubernetes*
- Developed a distributed microservices architecture in **Go** using **gRPC**, **REST**, and **AMQP**, supporting modular services for authentication, logging, email, and more.
- Deployed and scaled services with **Docker Swarm** and **Kubernetes**, integrating **PostgreSQL**, **MongoDB**, and **RabbitMQ** for robust data handling and message queues.

VIMrly | *TypeScript, webpack*
- Developed a Chrome Extension that integrates Vim Motions into Google Docs, enhancing text editing efficiency and user productivity.
- Implemented modal editing features using **TypeScript** and **webpack**, ensuring clean code structure and seamless bundling of scripts and static files.

NexaPulse Distributed Social Networking | *Svelte, Django, PostgreSQL*
- Developed a social networking web app using **Svelte**, with a focus on real-time communication with **AJAX**.
- Engineered a secure, scalable backend with **Django** and **PostgreSQL**, enabling features like user profiles, a follower-followee model, and content feeds.
- Built a distributed API network in collaboration with three other teams, allowing efficient cross-platform data sharing and communication through standardized API endpoints.

Four-Color Map Theorem Solver | *Next.js, Flask, PostgreSQL*
- Developed an interactive map-drawing canvas using **Next.js** (with **React** and **TailwindCSS**) and **p5.js**, with Bresenham's line algorithm implemented for precise line rendering.
- Designed a backend infrastructure using **Flask** and **PostgreSQL** to handle map data, solve the Four-Color Theorem problem with an efficient backtracking algorithm, and deliver accurate color mappings in real-time.

LANGUAGES AND TECHNOLOGIES

Languages: Python, Go, C, C++, JavaScript, TypeScript, HTML, CSS.
Front-End: React, Redux, Next.js, Svelte, webpack, Vite, TailwindCSS, MUI.
Back-End: Django, Flask, FastAPI, Go's net/http, chi, gRPC, PostgreSQL, MongoDB, RabbitMQ.
Others: Git, GitHub, Docker, Kubernetes, nginx, Postman, Microsoft Azure, ServiceNow.