Huu An Duc (Jack) Le

416-617-3686 | huuanducle@gmail.com | jack-le.com | linkedin.com/in/huu-an-duc-le | github.com/notjackl3

Education

University of Toronto 2028

Computer Science - Bachelor of Science - 3.76 GPA *Toronto, Canada*

Courses: Software Design (Object-Oriented Programming), Systems Programming (Unix/Linux), Computer Organization (Assembly), Data Structures & Analysis, Database Management Systems, Web Programming

Leaderships: Director of Operations (GenAI Genesis), Vice-President of Tech (UTMSAM), Organizer (EmberHacks), Tech Associate (UTMFA), Hackathon Mentor (Ignition Hacks)

Experiences

Research Assistant Sep 2025 – Present

University of Toronto *Toronto, Canada*

- Collaborated with PhD students and professors to **develop an AI coding assistant for 1,000+ students**, creating clear explanations, alternative solutions, and design rationales to enhance technical understanding
- Worked on microservice backend using TypeScript and OpenAI API to deliver contextual insights for AI responses
- **Analyzed 1,600+ user data points** using Pandas/Matplotlib to identify trends and optimize tool effectiveness

Software Project Lead Aug 2025 – Present

UofT Blueprint *Toronto, Canada*

- **Led 8 software developers**, organized development tickets to create a volunteer management system for TRCC
- Deployed Next.js app in TypeScript with Docker and CI/CD pipeline to **reduce deployment failures by 50%**
- Enforced **80% test coverage** (Vitest), added Husky pre-commit hooks, and automated dependency maintenance
- **Improved delivery time by 30%** for stakeholders using Git, Github workflows and SCRUM framework

Tech Support Assistant Aug 2025 – Present

UTM Career Center *Toronto, Canada*

- Delivered tech support, ensuring AODA-compliant and **inclusive UI/UX interfaces for 16,000+ students**
- Implemented JavaScript-based scripts for data-entry workflows, **saving $1,000/month** in operational cost
- Leveraged AI tools to optimize code and development time, delivering projects **1 month ahead of schedule**

Standard Operation Procedure Intern May 2025 – Aug 2025

TRG International *Ho Chi Minh, Vietnam*

- Built notification bots with automated workflows, **cutting communication time by 40%** for 150+ employees
- Created a Python tool to compare documents and track live changes, **saving 20+ minutes per review cycle**
- Automated geocoding of 100+ addresses and generating 2D interactive maps with documentations for HR team

Projects

Vibe-Learn **Java / Spring Boot / Apache Kafka / MongoDB / Docker / Grafana**

- Built event-driven VS Code extension capturing real-time code changes, processing 1,000+ events/session with sub-100ms latency across 4 Spring Boot microservices using Kafka message streaming and MongoDB database
- Optimized MongoDB connection and Kafka producer pooling, reducing request latency from 120ms to 2ms
- Configured circuit breakers and DLQ for fault tolerance, ensuring reliable processing with automatic recovery
- Made real-time Grafana dashboards to monitor service health, connection pool exhaustion, and partition lag
- Conducted load and stress testing, simulating 20+ concurrent users generating 50-500 events/seconds

UTM-Live **Python / Django / JavaScript / PostgreSQL / Mapbox**

- Created an interactive end-to-end Django app for students to explore study spots with realistic 3D models
- Boosted engagement with real-time dynamic lighting/weather effects based on user's live GPS coordinates
- Secured user information with JWT and PostgreSQL; designed REST APIs for location CRUD operations

SkySync **Python / JavaScript / Express.js / Node.js / React.js / MongoDB**

- This app identifies aircraft groups that can fly in bird-like formation to reduce fuel usage, saving up to 4% per trip
- Handled 1.6M+ flight records with MongoDB indexing and aggregation, reducing query delay from 15s to 500ms
- Designed a flight-pairing algorithm that creates 600K+ plane formations by proximity and schedule overlap
- Integrated Python gradient descent scripts with the Node.js backend to compute fuel-optimal routes in real time

Technical Skills

Languages: Python, JavaScript/Typescript, Java, C, SQL, HTML/CSS
Frameworks: Spring Boot, Next.js, Django, React.js, FastAPI, Flask, Tailwind CSS, Vitest, JUnit, PyTest
Technologies: Git/Github, PostgreSQL, MongoDB, Supabase, AWS, Google Cloud Platform, Apache Kafka, Docker
Coding Tools: VS Code, IntelliJ, Pycharm, Gemini CLI, Cursor, Claude