

# Andrew Lai

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## Skills

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**Languages:** C++, C#, Python, R, Java, TypeScript, HTML/CSS, MATLAB, Bash, LaTeX

**Relevant Frameworks/Libraries:** React, Node, Flask, Express, Pandas, TensorFlow, PyTorch, sci-kit

**Other:** Git, Docker, AWS ECS, AWS EC2, MongoDB, MySQL, JupyterLab, Linux Shell

## Experience

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### Software Engineer Co-op

Jan 2024 – Aug 2024

*ConeTec*

*Vancouver, BC*

- Leveraged advanced **React**, **TypeScript**, **Electron.js**, **Node.js**, and **Redux** technologies to develop internal data processing software used by ConeTec's geotechnical engineers
- Decreased loading times by up to **80%** on data-intensive pages through strategic migration and caching of cone-penetration and vane-testing analysis calculations on the main process
- Implemented numerous micro-features and refined existing functionality, including custom point labeling and improved graph scaling logic using **WebGL** and **canvas**.
- Followed an **Agile** and **Scrum** schedule to maximize work-efficiency and output within development team

### Software Engineer Intern

Jan 2023 – Apr 2023

*UCW Labs, Farmer's Hive*

*Vancouver, BC*

- Predicted irrigation levels based off of historical sensor data provided by company and weather API
- Designed and rigorously tested script with the objective of delivering the service to clients using company's smart sensors, utilizing GitLab for version control

### Contract & Freelance Work

Sep 2019 – Aug 2022

*P6, xegativ*

*Vancouver, BC*

- Co-led a collective of designers in creating artwork for **30+ clients**, resulting in sales totaling **\$20,000**
- Designed, documented, and engineered usable, web-related software for clients
- Developed clear and concise communication skills through direct client interactions

## Projects

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**mySips** | *React, TypeScript, MySQL, Express, Node.js, Passport.js*

🐙 agl320/mySips

- Constructed a React web app and Express backend API for storing and managing beverages with MySQL
- Utilized modular React components and hooks to create a visual and accessible user experience

**OutfitLB** | *Python, MongoDB, Tkinter, scikit-learn*

🐙 agl320/OutfitLB

- Employed custom class implementation and **Object-Oriented principles** to produce a clothing managing desktop application using **Tkinter**
- Stores user data on MongoDB to allow for data access across devices
- Use of **K-means clustering** to calculate color averages

**Devpost Scraper** | *Python, Flask, spaCy, BeautifulSoup4*

🐙 agl320/Dev-Post-Scraper

- Created a Flask web scraping application that extracts student project data from Devpost in bulk
- Utilized sentence extraction through spaCy to create an improved description retrieval and summarizing system for text data

## Education

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**Simon Fraser University**

Jan 2023 – Present

*B.A.Sc. Computer Engineering Major | Computing Science Minor*

*Burnaby, BC*

- GPA: 3.51/4.0, Dean's Honour Roll (Dec 2023 – Present)
- Skills: Embedded Systems, Electrical Diagrams, Soldering, Lab Equipment (DMM, Oscilloscopes, etc.)