# Philbert Lou

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## Education

University of Waterloo — Bachelor of Software Engineering *2020 - 2025*

*3.8 GPA | 86% Cumulative Average*

## Skills

Languages: Python, Javascript, Typescript, C++, SQL

Technologies: Firebase, Node, React, Express, Django, DB2, Stripe, MongoDB, Microsoft Azure

## Experience

### AP Capital — Software Engineer

*Toronto, ON | September 2022 - Present*

### TD Bank — Innovation Lab Software Engineer

*Waterloo, ON | January 2022 - April 2022*

- Deployed a collaborative drawing canvas application by utilizing **React** and **GUN** peer-to-peer graph database to deliver data to all users in real-time. Audited process and test results for future distributed systems explorations
- Developed an AI idea generation tool using **OpenAI's GPT-3** and **Firebase Cloud Functions** that creates and stores project ideas based on user-inputted topics into **Firestore database**

### PerkUp — Software Engineer

*Waterloo, ON | May 2021 - August 2021*

- Built client-requested frontend features by utilizing **React** in **Javascript** and patched critical user-facing bugs such as users being able to create duplicate Stripe credit cards, cutting virtual card issuing costs by **50%**
- Increased users' spending power by up to **100%** by revamping the backend monetary management system to support flexible **Stripe** transaction assignments towards users' budgets using **Typescript**, **Firebase Cloud Functions**, and **Firestore Database**
- Introduced platform security by implementing **Firebase Authentication**, **Firestore Rules**, and **Google Secrets Manager** to prevent unauthorized access to over **400** users' private documents

## Projects

### Essential

github.com/PhilbertLou/Essential

- Created a health-centric RESTful API using **Node** and **Express** for users to continuously track their water and sugar intake, set goals and restrictions, and build healthy habits
- Utilized **Passport.js** and **bcrypt** to authenticate users and to encrypt passwords stored in **MongoDB**

### Clothing Forecast

github.com/PhilbertLou/ClothingForecast

- Engineered a neural network using **TensorFlow** libraries in **Python** that predicts what a user should wear given local weather conditions and temperature
- Created **6937** rows of data to initially train the network using a supervised learning approach and continuously updated it with user data, resulting in more personalized clothing predictions over time
- Developed the frontend with **HTML**, **CSS**, **Javascript**, and **Bootstrap**, and used **Django** for the backend