Xinyu Blaire Pang

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EDUCATION

University of Michigan | B.S. Computer Science & Data Science (Double Major) ***Sep.2020-Apr.2024***
University of Washington | B.S. Computer Science (Then transferred) ***Sep.2019-Jun.2020***

SKILLS

- **Programming: Python**, **C++**, **TypeScript**, **JavaScript**, Java, SQL, HTML, CSS, Sass, C
- **Frameworks/Databases/Cloud: React**, **Next.js**, **Node.js**, **Express.js**, **Angular, MongoDB**, **MySQL**, Firebase, **AWS**
- **Software: VS Code**, IntelliJ, MATLAB, Visual Studio, jGRASP, **Git**, Maven, MySQL, PopSQL, WordPress, Postman

WORK EXPERIENCE

Software Engineer Intern | InstaHub ***Jan.2023-present***

- Built **IoT** dashboard in **React**, **Node**, and **Python**, visualizing real-time analytics with charts and heatmap based on the data collected from multi-sensor Datalogger and enabling users to observe room activities and manage devices online.
- Constructed Lambda functions with **API Gateway** which authenticates AWS **Cognito** users through an API call.
- Established and integrated AWS **DynamoDB** service for real-time data processing via RESTful APIs. Oversaw APIs construction and monitored the communication health with serverless frameworks using **Python** and AWS **Lambda.**
- Devised and refactored the **SQL** database leveraging **MySQL stored procedure** to calculate and store the averages of five sensor data points retrieved from the multi-sensor datalogger and reduced the frontend loading time by 50%.
- Oversee the team's progress by utilizing **Agile** techniques such as **sprints, Scrum, and Kanban** to create development schedules and track the state of tasks. Set up **CI/CD** pipeline to deploy the application using AWS **Amplify** and **Lambda.**

Web Development Intern | CAEN Michigan Engineering Information Technology ***Jun.2022-Sep.2022***

- Designed components in the frontend using **React, Next, HTML** and **CSS** to assemble a functional and dynamic UI and make the website infinitely scalable, easier to maintain and rendered consistently in cross-browser/device environments.
- Integrated authentication and authorizations using **JWT**, **SSL/TLS** and **OAuth2**, adding signup, login/logout, etc.
- Interacted with multiple **API** endpoints to retrieve and query user information from **MySQL** database and display the user information to the UI. Worked with clients and agencies to fine-tune styles according to the requirements.

Software Engineer Intern | Arriver ***Sep.2021-Dec.2021***

- Accomplished a **React** application using **Kepler.gl** to visualize and analyze vehicles routes and annotations.
- Devised data patterns using **Geo-Point** and **Geo-Shape** (lineString, polygon, envelope) to store **Geospatial** data coming from vehicles as **GeoJSON** format to the document based **Elasticsearch database** using both lat/lon and **GeoHash**.
- Implemented Geo-distance query, Geo-bounding box query, Geo-polygon query and Geoshape **query** in both query context and filtered context, enabling users to query and update specific data from the database using **search API**.

EXTRACURRICULAR EXPERIENCE

Computer Science Instructor | Juni Learning ***Jan.2023-present***

- Executed advanced computer science lessons on Data Structures & Algorithms in **Python** and **C++**.

Blockchain developer | Blockchain at Michigan ***Jan.2023-present***

- Developed different blockchain projects with a group of 5 people about crypto, web3, bitcoin, Ethereum, etc.

System Design Team Member | Michigan Hackers ***Aug.2021-present***

- Participated in a team of 15 people to research and learn different systems, databases, distributed systems, etc.
- Designed and built out simple versions of complex systems in real life such as Tinder, Instagram, Google, Youtube, etc.

Participant Developer | SpartaHack8 Hackathon ***Jan.2023-Jan.2023***

- **Led** a group of four people to develop a Stock Social Media Sentiment Analysis Generator using **React**, **Python**, and **Flask** within 24 hours, deployed, delivered the demo, and made a presentation at SpartaHack8 Hackathon held by MSU.

PROJECT EXPERIENCE

Online Clothing Store E-Commerce (React.js, Firebase) ***Dec.2022-Jan.2023***

Live website: https://super-scone-9b11e4.netlify.app/ Github: https://github.com/XinyuP/crown-clothing-ecommerce

- Built a full stack **E-commerce** web application with features of login with email/password and login with google popup, logout, signup, shopping cart, checkout page and Drop-Down Lists using **React** and **Firebase.**
- Designed **NoSQL** database using **Firebase** to persist and process user information data, product, and shopping cart data.
- Utilized **React**(**React Router, React Hooks** including **Context API**) to manage state globally and make particular data available to all the components. Applied **Stripe API** to process transactions with credit card method.
- Completed **CI/CD** pipeline for auto building and testing and deployed with **Netlify.**

Instagram Clone (Full Stack, React, Python, Flask, SQL) ***Jan.2022-Mar.2022***

- **Led** a team of three to build a Full Stack interactive Instagram Clone using **React**, **Python**, **Flask,** and **SQL**.
- Implemented a dynamic backend **server-side** to generate an interactive website **in Python and Flask.** Created multiple REST API endpoints for **CRUD** operation. Designed a **SQL** database to store the data of users, posts, following, comments and likes.
- Wrote a client-side application in **React** that runs in the browser and makes **AJAX** calls to the **REST API.** Implemented features of clicking like or comment without a page reload or redirection, infinite scroll, double-click to like, etc.
- Integrated **HTTP** Basic Access Authentication to enhance security. Deployed the application to the live website using **AWS EC2**.