Yuxiang Chen

Software Engineer Candidate

(651) 706-6208 | ychen1@macalester.edu | chenyyxx | yuxiang-chen-1204/

Software Engineer candidate with strong background in programming, analytic and system designing. Have 3 years of project experience, including cross-platform mobile and web development and machine learning. Solid in computer science, mathematics and statistics. Expert in Java, JavaScript, Python and SQL. Skilled in data science, statistical modeling, and machine learning.

Education

Macalester College — **Saint Paul, MN**

B.A.: double major in Computer Science, Applied Mathematics — **Expected May 2020**

- **Major GPA:** 3.7/4.0
- **Relevant Coursework:** Object Oriented Programming, Software Development, Algorithm Design, Database Management, Artificial Intelligence, Computer Systems, Statistical Modeling, Probability, Machine Learning, Data Science, Network Science

Work Experience

Anyka Technologies Corp. — **Guangzhou, China**

Software Engineer Internship — **Dec 2019 - Feb 2020**

- Trained **deep learning** model for face recognition by implementing the **FaceNet** algorithm with the **TensorFlow** framework
- Improved the prediction accuracy of the deep learning model by using **MTCNN** algorithm to extract faces from the training dataset
- Developed a real time face recognition and object detection cross-platform mobile app backed by YOLO and FaceNet algorithms with **Flutter** and **TensorFlow-Lite** for product demo

Harvard University — **Boston, MA**

Machine Learning Research Internship — **June 2019 - Sept 2019**

- Cleaned and used genome-wide genetic variants to predict disease risk and quantitative trait using **Pandas**, and **Numpy** libraries in python
- Implemented a **distributed gradient boosting tree model** using **XGBoost library** in python to fit **terabyte-scale genetic data**
- Used **Slurm** to manage the training jobs scheduling among data nodes in the **cluster**
- Handled **data communication** and data passing for each iteration of machine learning among nodes in cluster with **Allreduce** using **MPI**(Message Passing Interface) and Rabit Library in python

Projects

TweetsTrend: a React, Spring Boot and Spark based NLP Web App on Tweets

https://github.com/chenyyxx/TweetsTrend.git

- Developed an web application and a backend system that analyze the sentiments of tweets in real time utilizing **React** on front end, **Spring Boot** on back end and **Spark** for data streaming and NLP processing
- **Front End:** Created a dashboard using **React, Ant Visualization and Ant Design** backed by **Twitter API** to visualize the sentiment score of trending keywords, word frequency, and example tweets in **real time**
- **Service:** Streamed data from **Twitter API** with **Tweepy** and analyzed the sentiments of tweets with **NLP** tool **VADER** under **Spark**
- **Back End:** Used **Spring Boot** framework to handle GET requests from front end and PUT requests from Spark with **Spring MVC** framework
- **Database:** Used **MySQL** to store the **NLP** result forwarded from Spark with Spring Data JPA

EventS: Java Web Service Development - Event Search and Ticket Recommendation

http://18.221.123.15/EventS/

- **Front End:** Developed an interactive web page for users to search events and purchase tickets (**HTML, CSS and JavaScript, AJAX**)
- **Back End:** Created 6 Java servlets with **RESTful APIs** to handle HTTP requests and responses
- **Database:** Build relational and **NoSQL** databases (**MySQL, MongoDB**) to capture real business data from TicketMaster API
- **Business Logic Implementation:** Implemented **content-based recommendation** algorithm to improve personalized business recommendation based on search history and favorite records
- **DevOps:** Deployed server side to **Amazon EC2** to handle 150 QPS tested by **Apache JMeter**

Ways: LBS based Android App for Smart Driving

https://github.com/chenyyxx/Ways.git

- Integrated **Google Map API** to display the nearby hot alerts and navigate to avoid traffic
- Used **Google Firebase** to store and manage UGC including comments, images, descriptions, title, geolocations
- Implemented the viewpager to hold the login and register fragments; Improved the UI/UX flow with Animation, ToolBar/Action Bar etc.
- Used the speech recognition intent to handle simple **voice control**

ExpressCourier: a React and Spring Boot based Drones Delivery Web App

https://github.com/jianghoy/express-courier.git

- Developed an automated drone delivery web application utilizing **React** on front end design and **Spring Boot** framework on back end service
- Created the order panel and navigation bar in the main page using **React, Ant Design** to let users place delivery orders and customize their delivery options based on estimated price and time
- Developed an address autocomplete search bar and implemented the **direction visualizing** mapview by integrating **Google Map Places, Geocoding and Direction APIs**
- Integrated front end and back end by filling UI data display with HTTP responses fetched from back end server
- Implemented the price-estimation algorithms on back end controller and service to support dynamic price fluctuation based on users' inputs

Skills

Languages Java (Proficient), JavaScript (Proficient), HTML (Proficient), CSS (Proficient), Python (Proficient), SQL (Proficient), C (Basic)

Frameworks React, React-Native, Flutter, Spring, Spring Boot, Spring Security, Spring Data JPA, Hibernate, TensorFlow

Tools Git, Linux, Node.js, AWS, Apache Tomcat, Apache Maven, MySQL, MongoDB, Firebase, Android, REST.API, AJAX