PENGRUI MA

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EDUCATION

New York University–M.S. in Computer Engineering(GPA: 3.77/4)	*Sep. 2021 - May. 2023*
University of Science and Technology of China–B.S. in Applied Physics	*Sep. 2017 - July. 2021*

TECHNICAL SKILLS

Programming Language: Java, Python, JavaScript, TypeScript, PHP, C++, Bash/Shell Scripting
Frameworks: React, Redux, Hack, Spark, Next.js, Angular, Spring, Axios, Bootstrap
Database: MongoDB, MySQL
CI/CD & Development Tools: Git, Docker, Jenkins, Travis-CI, Node.js, AWS
Architecture & Methodology: Microservices, Object-Oriented Programming, MVC

WORK EXPERIENCE

Software Engineer Intern — May. 2022 - Aug. 2022
Meta Platforms, Inc — *Seattle - United States*

- Worked on improving fundamental aspects of the real-time business impersonation detection flow for high-value brands with **Machine Learning** technologies in Ads problem team.
- Set up multiple data pipeline with **Python** to expand image detection recall and implemented new trigger in back-end enforcement infra with **PHP** for similarity detection.
- Manipulated data with **SQL** and analyzed with **GraphQL**. Retrieved feature and retrain entity-agnostic classifier.
- Achieved **94% detection rate** and improved **21% daily match volume** of imposters on extended coverage of photos.

PERSONAL PROJECT

Highly Scalable MERN-Stack Application with AWS – Hacker.io
- Developed with **React** and **Next.js** for client-side and **Node.js**, **Express**, **MongoDB** for server-side.
- Maintained **AWS** services such as **S3** for files storage, **SES** for sending emails and **EC2** for cloud hosting, **IAM** for Identity and access management. Route 53 for domain management along with custom rules/policy.
- Aimed for low cost of operation and implemented functionalities to make it much easier and engaging to use.

Spring Framework Web Application – PetsClinic
- Utilized **Spring Boot**, **Spring MVC** , and **Spring Data JPA** to create functions with H2 database.
- Constructed Test Driven Development (TDD) with **JUnit 5** and **Mockito** and set up Continuous Integration builds with **CircleCI**.
- Converted the old version to reactive application with **WebFlux** framework and deployed to a **Docker** container.
- Implemented **RESTful APIs** with Spring MVC and added custom exception handling, form validation.

Full-Stack Application based on Angular and Spring Boot – Luv2Shop
- Adapted **Angular** for client-side and **Spring Boot** for server-side linked with RESTful API.
- Generated and updated component with **TypeScript** class and Angular service and integrated HTML template with **Bootstrap** CSS to style.
- Implemented dynamic search component with **Query** method and added pagination to **MySQL**.
- Created RESTful APIs with Spring Data **JPA Repositories** and utilized Angular validators, **Oktafor** for check-out authorization with **JWT**.

MERN-Stack Real-Time Web Application – Eshop
- Constructed users data with **MongoDB** and Express **Validator**, used middleware to achieve authorization.
- Utlized **Axios** to send request and created reusable components with **Bootstrap**.
- Designed **CRUD** Routes with **RESTful** APIs and extracted **Stripe** API for online payment.
- Pushed to dockerhub using a **CI/CD** offered by **Travis-CI** and saved static images to **Google Cloud** Storage.