Yuchen Huang

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EDUCATION

Northeastern University   **Sep 2024 – Jun 2026**
M.S. in Computer Science   **Seattle, WA**

Shanghai University   **Sep 2011 – Jul 2015**
B.A. in Economics   **Shanghai, CN**

Coursework: Data Structures, Algorithm, Object-Oriented Design, Database System, Distributed System, Operating Systems

SKILLS

Programming Languages: Python (Proficient), JavaScript / TypeScript (Proficient), Java (Proficient), Go, HTML/CSS
Framework & tools: React, Next.js, Node.js, Tailwind CSS, SpringCloud, REST, Kafka, RabbitMQ, MybatisPlus
Databases & Storage: PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch
DevOps & Cloud: AWS (EC2/S3/Lambda/ECS/CloudWatch), Docker, Kubernetes, CI/CD (GitHub Actions/Jenkins)

WORK EXPERIENCE

Omron Automation (China) Company Ltd.   **Jun 2020 - May 2024**
Project Engineer   **Shanghai, CN**
- **Client communication**: Drove client interest and satisfaction through in-person communication and secured up to $1M contracts.
- **Visualized data:** Reduced onsite presentation time by 50% by enabling direct **Power BI** dashboard access for real-time update.
- **Agile** Process Control: Led **Agile** workflows using **JIRA** ticket system, boosted daily task completion by 25%.
- **Test Automation**: Built a **Selenium/JUnit5** test framework, achieved 92% coverage and cut post-release defects by 30%.
- **CI/CD** Optimization: Shortened sprint cycles from 3 to 2.2 weeks, reduced manual coordination efforts by 40%.
- **Kubernetes sandbox deployment:** Used **Terraform** to slash setup time by 65% and enabled 5+ teams to test concurrently.

STS Certified Ltd.   **Aug 2015 - May 2019**
Project Specialist   **Shanghai, CN**
- **Cross-team Data Governance**: Led workshops with lab/IT teams to standardize data schemas, reducing errors by 30%.
- Created scalable **ETL** workflows: Used **Python (Pandas + Dask)** for processing 500GB+ (CSV/JSON) datasets.
- Deployed dashboards: **Plotly Dash** dashboards with time-series aggregation and outlier highlighting, improved analysis time by 25%.
- Enhanced Monitoring System Visualization: Trained **time-series models** to forecast calibration needs and reduced critical incidents.
- Introduced **Predictive Maintenance**: forecast calibration needs based on logs, prevented 5+ unplanned downtime events annually.

PROJECTS

E-Commerce Microservices Platform   (Microservices, Distributed System, Cloud-Native, Full-Stack)
Stack: Express.js, Next.js, Apache Kafka, MongoDB, Docker, Nx, Prisma, AWS (ECS, EC2, CloudWatch), Socket.IO, Stripe
Built a scalable e-commerce platform using microservice architecture and cloud-native technologies, supporting User Authentication / Product Management / Order Processing / Payment Processing / Product Searching / High-traffic Flash Sales.
- Containerized and deployed **microservices** (Auth, Product, Order, etc.) on **AWS ECS**, monitored by **CloudWatch**.
- Applied **MongoDB** indexing and aggregation pipelines to optimize query and support flexible document-based order schemas.
- Integrated **Apache Kafka** to decouple multiple services, processing 2K+ events/sec with **high availability and fault tolerance**.
- Prevented overselling via **MongoDB transactions and atomic operators**, reducing API latency by 60%, supporting 5K orders/sec.
- Orchestrated **CI/CD** workflows via GitHub Actions: code quality checks, unit testing, Docker builds, and staged deployments.

AI Travel Planner Mobile & Web Application   (AI Integration, Cross Platform, Full-Stack)
Stack: React Native (Expo), TypeScript / JavaScript, Firebase, Google Places & Maps APIs, Gemini AI
AI-powered cross-platform travel app generating personalized itineraries using Google Gemini AI. Key features include real-time attraction suggestions, hotel/flight integration, and user profile/trip history.
- AI Integration: Integrated **Google Gemini** model to generate **JSON** itineraries; handled real-time responses and validation.
- Cloud Backend: Used **Firebase Authentication** for secure login; **Firestore** for structured itinerary data with normalization.
- API Ecosystem: Connected **Google Places API** (autocomplete, location search), **Google Maps API** (visualization).
- State/Data Management: Enforced cross-platform **data consistency** (mobile/web) and complex object parsing.

CERTIFICATION

AWS Certified Solutions Architect – Associate   **Dec 2024**
Project Management Professional   Jun 2019