Chaoran Huang

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TECHNICAL SKILLS

- **Languages:** Python, Java, TypeScript, JavaScript, SQL, C++
- **Frameworks & Systems:** Effect.ts, React, Node.js, GraphQL, Kafka, SpringBoot, PostgreSQL, PyTorch, TensorFlow
- **Architecture:** Distributed systems, event-driven architectures, AI service integration, secure system design & applied cryptography
- **Cloud & DevOps:** AWS, Docker, CI/CD, GitHub Actions, Linux

EXPERIENCE

OpenGov, Inc. — Software Engineer II *Sept 2024 – Present*
Boston, MA

AI Plan Review, Permit & Licensing *Feb 2026 – Present*

- Founding engineer for AI-assisted plan review system; defined core architecture, service boundaries, and technical roadmap for initial platform build-out.
- Designed model integration patterns and inference orchestration flows to embed AI into regulatory review workflows while preserving deterministic system behavior.
- Established structured experimentation, evaluation, and validation processes to ensure reproducibility, traceability, and safe feature rollout.
- Built monitoring and feedback mechanisms to assess AI-assisted decision quality and support iterative system refinement.
- Worked directly with product, legal, and domain experts to translate regulatory constraints into enforceable technical requirements.

Utility Billing, Revenue *Sept 2024 – Feb 2026*

- Founding engineer on greenfield Utility Billing platform; led architecture and launch of production SaaS system adopted by live government customers.
- Designed and implemented full-stack distributed system using React, GraphQL, Node.js, Kafka, PostgreSQL, and AWS.
- Architected event-driven services to support real-time billing operations, asynchronous processing, and future regulatory extensibility.
- Built CI/CD and containerized deployment workflows to improve release reliability and environment consistency.
- Partnered with security engineers to design authentication, authorization, and data protection mechanisms aligned with regulatory and compliance standards.

My Car Auction, Inc. — Software Developer *March 2021 – July 2022*
Irvine, CA

- Built automated inspection and auction management systems integrating frontend applications with backend microservices to streamline operational workflows.
- Engineered high-volume competitor pricing pipeline using Selenium and Puppeteer, collecting and normalizing data across 30,000+ nationwide sources.
- Designed NLP pipeline using SpaCy and transformer models to extract structured vehicle attributes, improving lead quality by 70% and enabling downstream automation.
- Integrated Oracle NetSuite ERP/CRM systems using Java Spring Boot and OAuth2, improving data consistency and financial workflow automation.
- Translated evolving business requirements into scalable system designs in collaboration with finance and operations teams.

EDUCATION

Brown University 2022 – 2024
M.S. Computer Science, GPA: 3.8

University of California, Irvine 2017 – 2021
B.S. Computer Science, Major GPA: 3.9

RESEARCH & SELECTED PROJECTS

Activation Checkpointing for Deep Neural Network Training 2024

- Implemented memory-efficient training strategies in PyTorch, reducing peak GPU memory usage by 70–85%.
- Developed computation graph profiling tools to analyze memory–compute tradeoffs for transformer and CNN models.

Named Entity Recognition for Vehicle Listings 2021

- Engineered NLP pipelines using SpaCy, CNN/LSTM, and BERT to extract structured vehicle attributes from unstructured descriptions.
- Integrated models into production workflow, improving downstream lead quality by 70%.

Netflix Fullstack Clone 2020

- Built full-stack web application using Java, MySQL, and AWS with search, authentication, and performance optimization.