

Lucheng Qing

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EDUCATION

B.S. in Computer Science GPA: 4.00/4.00, University of Illinois Urbana-Champaign May 2023
Freshman & Sophomore in Computer Science GPA: 4.00/4.00, The Pennsylvania State University May 2021

SKILLS

Languages: Python, SQL, JS/ES8/CommonJS, TypeScript, Java, C, HTML5/CSS3, shell scripting, Verilog

Frameworks/Tools: Django/DRF, Flask, Gunicorn, Celery, Docker, Nginx, K8s, NATS, Skaffold, Redis, NumPy, React, Redux, Material UI, Next.js, Node.js, Express.js, Nest.js, Socket.IO, TypeORM, MikroORM, Mongoose, OAuth, Android, PostgreSQL, MySQL, MongoDB, Neo4j, Git, GitHub Action, AWS, GCP

Knowledge: API, OOP, FP, CRUD, MVC, SPA, DTO, REST, ORM, CORS, NPM, HTTP, UML, DI, Microservice

WORK EXPERIENCE

Briefly AI: Django/React based AI Summarization System February 2021 – November 2021

Backend & DevOps Leader, Nittany AI Challenge, University Park, PA – Remote

- Developed a video summarizer on **Python, Django, Nginx, AWS, PostgreSQL, React, OAuth, OpenAI**.
- Implemented the REST API with **Django Rest Framework** on **AWS Transcribe, AWS S3, PostgreSQL**, used **DRF-Nested-Routers** for nested resources, **Boto3-Django-Storage** for video storage.
- Implemented the frontend with **React** with **Material UI, Redux** for state management, **Redux-Thunk, Redux-Persist, Axios** for HTTP requests, **OAuth** for user authentication with **Django-OAuth-Toolkit**.
- Deployed and maintained the site with **Nginx, Gunicorn, Systemctl** on **DigitalOcean**.
- Developed the backend task queue with **Celery** and **RabbitMQ** for machine learning task invocation, and **PostgreSQL** for result storage.

PROJECTS

NoteHub: JS Based Collaborative Notetaking Platform August 2021 - Present

- Implemented a real-time collaborative **Markdown** styled **WYSIWYG** editor on **MEVN** stack.
- refracted database from **MySQL** with **Sequelize** on **GCP** to **MongoDB** with **Mongoose** on **Express.js**.
- Used **Github Action** for continuous delivery, **CPanel** for hosting, **Docker** for consistent mobility.
- Applied **Tiptap-Hocuspocus** on **Node.js** for rich-text UI and websocket backend for collaborative editing on **Y.js**.

PeopleWeave: Nestjs based Academic Networking Platform - CoNEXT August 2021 – Present

- Built a networking web used by **CoNEXT 2021**, utilized **Nest.js, TypeORM, React, MongoDB**, used by two hundred conference participants to grow their networking.
- Implemented the frontend with **React, Material UI, Redux, Reselect** for a consistent UI design.
- Built the server on **Nest.js**, used **Passport.js, JWT, Bcrypt, NodeMailer** for user authentication.
- Integrated **Neo4J** for data visualization, network maps, used **Swagger** for API display.

TicketIt: Microservice Architected Ticket Sale Platform November 2021 – Present

- Implemented the frontend with **React - Next.js** based server-side rendering application in **TS**.
- Designed the backend with **Express.js, Mongoose, Redis, NATS Streaming Server** in a microservice style, allowing loosely-coupled services to communicate with a shared Event Bus.
- Orchestrated containers with **K8s**, utilized the load balancer **Ingress-Nginx** for requests routing.
- Used **Docker, Skaffold** to handle the building workflow, deployed the app on DigitalOcean.

COURSEWORK/ AWARDS

- Data structure, Algorithm, Computer Architecture, Database, Numerical Analysis, System Programming
- Dean's List for 2019-2021, The President Sparks Award for 2021