

Nick Luo

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EDUCATION

Columbia University

New York, NY

B.S. Computer Science

Expected May 2024

- **Cumulative GPA:** 3.78/4.0; Dean's List
- **Relevant Coursework:** Operating Systems, NLP, Databases, Cloud Computing, UI Design, SaaS, Advanced Programming, Deep Learning, Probability, Machine Learning, Computer Networks, Computer Vision

Middlebury College

Middlebury, VT

Computer Science, Spanish

September 2019 - May 2022

- **GPA:** 3.90/4.0; **Major GPA:** 3.98/4.00; College Scholar, Dean's List
- **Relevant Coursework:** Artificial Intelligence, Algorithms, Data Structures, Computer Architecture

SELECTED SKILLS

- **Programming Languages:** Python (Most Proficient), C++, Java, C, R, SQL, JavaScript, Ruby
- **Infrastructure:** AWS, GCP, CI/CD, Terraform, Docker, Kubernetes, Airflow, Linux, Git, Kafka, Redis
- **Web Development:** FastAPI, Flask, Django Rails, React.js, Node.js, Spring, Kibana, MongoDB, Postman

WORK EXPERIENCE

tHRive (Columbia Build Lab)

Software Engineer - Backend

May 2023 – Present

- Built authentication feature for **2000+ users** via **FastAPI** with JWT and OAuth2 on **AWS** (API Gateway).
- Architected **SQL** database with an Indeed **data pipeline** for recruiting portal with **200+ data entries**.
- Constructed frontend and backend, including **30+ RESTful APIs**, of HR Platform with **React.js**.

Ease

Software Engineer - Backend

Nov 2023 – Jan 2024

- Collected **20000+ investors datapoints** to construct a vector search chatbot with **MongoDB** with **FastAPI**.
- Developed **RAG chatbot** browsing nested URL with **Elasticsearch** and **VertexAI**, deployed with **CI/CD**.

VentureCopilot, Inc

Software Engineer - NLP

May 2023 – Aug 2023

- Developed and deployed the **Chatbot Agent** that supports **200+ users** with **FastAPI** and **Docker**.
- Constructed data pipeline that collects **1000+ data points** and stores data into **SQL** and **Pinecone**.
- Built **Search Engine**, **Email Automator**, and **Founder Emulator**, deployed with **Docker** on **AWS**.

Polywill New Material Co, Ltd.

Data Engineer

December 2019 – July 2023

- Developed a **SQL** database with **5000+ entries**, enabling dataflow for biannual analysis using **Airflow**.
- Optimized **Flask**-based automation for data analytic process from **200+ companies**, saved **640+ hours** for the management team.

RESEARCH & PROJECTS

Columbia University

Backend Engineer - DataDave

September 2023 – November 2023

- Constructed a **chatbot** application takes datasheet or metadata (users provide columns) using **Rails**.
- Automated data manipulation to obtain AI-generated **SQL** database, query, and analysis with **Ruby**.

Research Assistant - A2R Lab – Parallel Differential Dynamic Programming

January 2023 – July 2023

- Implemented PDDP Algorithm focusing on memory optimization, improved **30% in memory allocation**.
- Developed trajectory optimization features and libraries in **Python** then translated to **C++** and **CUDA**.

Middlebury College Computer Science Department

Research Assistant/Backend Engineer - Dial-a-Ride

June 2021 - August 2022

- Developed a **driver scheduling algorithm**, achieved **90% approximation** and **100s** run time reduction.
- Built a **Django** web app with **SQL** database, increased dispatching efficiency by **8 times**, serving **600+ users**.