Nuo Wen Lei

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EDUCATION

Brown University, *Sc.B. Computer Science*, 4.00/4.00 GPA — Providence, RI | **Expected Graduation May 2026**
Relevant Courses: Deep Learning, Software Engineering, Computer Systems, Database Management Systems, Data Engineering, Large Language Models (LLM), Computer Vision, Statistics, Machine Learning, Data Science, Data Structure and Algorithms
Organizations: Brown Entrepreneurship Program Tech Team, Brown Machine Intelligence Community (B-MIC)
Certificates: Advanced Data Science with IBM, Machine Learning Engineering for Production (MLOps)

WORK EXPERIENCE

Ramp, *Incoming Backend Software Engineering Intern* — New York, NY | Sep 2025 – Nov 2025
Databricks, *Software Engineering Intern* — Mountain View, CA | May 2025 – Aug 2025

- Developed a **disaster recovery** layer into the **distributed observability infrastructure** with **Go** to prevent time series data loss during infrastructure outages
- Implemented asynchronous uploads of **Prometheus** metrics to **AWS S3 blob storage** using **Go goroutines**, maintaining high ingestion throughput under failure conditions
- Deployed the custom disaster recovery solution on multiple AWS regions, serving both internal and external services, ingesting **up to 30GB per region per hour** during peak outages
- Built an automated backfill mechanism to restore metrics from blob storage into **Thanos** databases, ensuring complete recovery of time series data post-outage

Microsoft, *Software Engineering Intern* — Redmond, WA | Jun 2024 – Aug 2024

- Developed and published SDK integration examples in **Next.js, Vue.js, and Angular** to streamline enterprise integration for the **Face Liveness SDK**, reducing setup process by **50%** and improving accessibility for enterprise developers
- Contributed to **rapid adoption** such that within **one month** of release, **24 enterprises** used the SDK through these examples, resulting in **2000+ API calls**, demonstrating immediate impact with enterprise clients
- Configured **Azure DevOps** pipelines in **YAML** to automate build, deployment, and testing using continuous integration and continuous deployment (**CI/CD**), reducing manual errors and speeding up development cycle
- Deployed and presented web apps with the **ASP.NET server stack** on **Microsoft Azure App Service**

Brown University, *Undergraduate Teaching Assistant* — Providence, RI | Jan 2024 – May 2024

- Improved **Computer Vision conceptual** questions for **130+ students**, deepening student understanding on image extraction
- Implemented partial credit system on autograding server using **Python**, correcting the grades of **100+ submissions**
- Answered or assisted on **40+ course forum questions** about programming assignments and conceptual questions

QuantGuide, *Founding Engineer* — Virtual | May 2023 – Nov 2023

- Led website frontend development using **React.js** with **Next.js**, impacting **7000+ users**
- Worked with content and engineering team members in an agile environment with **Kanban** for project tracking helping the startup join the **Y Combinator accelerator program (YC)**
- Integrated **Firebase Firestore** to handle content queries and record all user interactions with the website, including profile changes, likes, dislikes, and question notes, totaling **1M+ daily reads and writes**
- Developed and delivered new features with TypeScript including an auto-generating mental math game played **16000+ times**

Numerai, *Software Engineering Intern* — San Francisco, CA | Jun 2023 – Aug 2023

- Deployed a **machine learning model** improving **Sharpe Ratio by 22%** in backtests, managing **over $100 million in assets**
- Backtested and documented **200+ ensemble model** configurations in **AWS Sagemaker** using **Python** to optimize for Sharpe Ratio while minimizing Churn Rate, Market Exposures, and other risk metrics
- Proposed and validated a new alpha uniqueness metric with **Pandas Python library** for **2000+ users**

PROJECTS

Dynamic Environment Generation with Image Diffusion | *Python, TensorFlow, NumPy*

- Led a team of three to develop an **interactive video generation model** for a Master's level **Deep Learning** class
- Engineered a Latent Action Model using **TensorFlow**, learning **unsupervised** video actions without any data on interactivity
- Developed preprocessing pipelines with **TensorFlow**, **Keras**, and **NumPy** to efficiently compress **700,000 video frames**
- Presented our innovations to **40+ professors, PhD students, and classmates**
- GitHub Project Repository

SKILLS

Technical Skills: Python, Typescript, Go, R, Java, C#, SQL, HTML, CSS
Development Tools: GitHub, Docker, Amazon Web Services (AWS), Kubernetes, Microsoft Azure, Google Cloud
Web Frameworks: Django, Flask, FastAPI, Next.js, Vue.js, Angular, Node.js, ASP.NET
Language: Bilingual proficiency in Mandarin Chinese and English