Nuo Wen Lei

+1 (978) 831-7432 | nuo_wen_lei@brown.edu
nuowenlei.github.io/personal-portfolio | linkedin.com/in/nuo-wen-lei/ | github.com/NuoWenLei

EDUCATION

Brown University, *B.S in Computer Science*, 4.00/4.00 GPA — Providence, RI | **Expected Graduation May 2026**
Relevant Courses: Deep Learning, Computer Systems, Software Engineering, Computer Vision, Honors Statistical Inference, Data Engineering, Machine Learning, Data Science, Multivariable Calculus, Linear Algebra, Discrete Math, Functional Programming
Organizations: Brown Entrepreneurship Program Tech Team, Brown Machine Intelligence Community (B-MIC)
Certificates: Advanced Data Science with IBM, Machine Learning Engineering for Production (MLOps)

SOFTWARE EXPERIENCE

Microsoft, *Software Engineering Intern* — Redmond, WA | Jun 2024 – Aug 2024
- Deployed Face Liveness SDK example web apps in Next.js, Angular, and Vue.js using Microsoft Azure App Services
- Published and documented SDK integration examples for Next.js, Angular, and Vue.js for current and prospect customers
- Configured Azure DevOps pipelines in YAML to automate build, deployment, and testing using continuous integration and continuous deployment (CI/CD)
- Engaged in weekly standup meetings with the Face Liveness and Azure AI Platform team to discuss roadmap and progress

Brown University, *Undergraduate Teaching Assistant* — Providence, RI | Jan 2024 – Current
- Improved Computer Vision conceptual questions about image feature extraction for 130+ students
- 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
- Held weekly office hours for questions on course material, averaging 10+ assisted students per session
- Mentored final projects about facial emotion detection and 3D reconstruction from drone footage

QuantGuide, *Founding Engineer* — Virtual | May 2023 – Nov 2023
- Spearheaded website frontend development using React.js with Next.js, directly impacting 7000+ users
- Collaborated with content and engineering team members in an agile environment with Kanban to push the startup into the Y Combinator accelerator program (YC)
- Integrated Firebase realtime database to respond to all content queries and record all user interactions with the website, including profile changes, likes and dislikes, and question notes, which sums up to 1M+ daily reads and writes
- Developed and delivered new features such as an auto-generating mental math game that has been played for 16000+ times

Numerai, *Software Engineer Intern* — San Francisco, CA | Jun 2023 – Aug 2023
- Deployed a machine learning model that has a 22% higher Sharpe in backtest than the previous model into production with more than $100 million in Assets Under Management
- 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 metric with Pandas Python library for 2000+ users to measure the uniqueness of their alpha submissions based on correlation to other users

LEADERSHIP EXPERIENCE

Brown Machine Intelligence Community, *Executive Board* — Providence, RI | Oct 2022 – Current
- Taught 160+ university students high-level topics in language modeling and image processing including Generative Pretrained Transformers (GPT) and Neural Style Transfer with the Teaching and Content team of 10+ members
- Developed interactive teaching material used 400+ times with Jupyter Notebook to guide the model development process

PROJECT EXPERIENCE

Dynamic Environment Generation with Image Diffusion, *Tech Lead*
- 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 video 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 & INTERESTS

Technical Skills: Python, Javascript, Typescript, R, Java, SQL, HTML/CSS
Development Tools: GitHub, Docker, Amazon Web Services (AWS), Microsoft Azure
Language: Bilingual proficiency in Mandarin Chinese and English
Interests: Tennis, Basketball, Squash, Minecraft