Ani Nuthalapati

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WORK EXPERIENCE

Tokyo Electron Limited **Minneapolis, MN**
Software Engineer II *Jul '24 - Present*

- Architect, develop scheduling system (C#), increase throughput by 13% ($600k+/y), reduce fatal error rate by 4% ($250k+/y) for $6MM semiconductor manufacturing tool
- Led design, implementation of new wafer movement control software (C#, VB), reduce wait times (19%)
- Aid in development of XGBoost ML model (Matlab), improved etch precision (14%), reduce etch time (7%)
- Built rotational-invariant CNN (PyTorch) to improve photolithography speed by 30% ($100k+/y)
- Drove adoption of Github Copilot, held seminars, trained senior developers/managers, developed training materials to increase team-wide commit frequency (14%)

Boston Scientific **San Jose, CA**
Graduate Software Engineering Intern (Neuromodulation) *May '23 – Aug '23*

- Created streamlined framework for Agile development to enhance timeline, improve consistency
- Reduced PM approval backlog by 42%, rejected PR rate by 30%, raised sprint velocity by 22% ($300k+/y)
- Built Jira Plugin (Java, Spring Boot), wrote scripts for ScriptRunner (Java, Groovy) to enforce framework
- Collaborated with SWE Director, PMs, Devs, identified issues with existing Agile processes

Software Engineering Intern (Neuromodulation) *May '22 – Aug '22*

- Developed iOS app (Swift) to remotely control spinal cord chronic pain implant (C++), reduced patient visits by 70% and visit duration by 25% ($300k/y)
- Built HIPPA-compliant communication platform allowing patients, clinicians to chat and video/voice call

Bayer Pharmaceuticals **Jersey City, NJ**
AI Intern (Digital Health R&D) *May '21 – Sep '21*

- Built WebApp (Node.JS, React), detected research trends (93% accuracy), rising startups (86% accuracy)
- Built attention-based transformer (PyTorch) to perform text analysis, classification, and trend generation
- Tool was used across 6 teams to increase initial hit rate of R&D teams by 15% ($100k/y)

PROJECTS

Cognify-GNN

- Designed, implemented GNNs to analyze iEEG data and predict patients' cognitive test scores
- Achieved self-supervised learning through the use of Variational Graph Autoencoders (VGAEs)

Medical ML Explainability Visualization Tool (Master's Project)

- Built and trained NN (TensorFlow.js) to predict diabetes progression
- Built interactive interface (Node.JS, Typescript) to visualize model components, SHAPley explainability values
- First-author publication in IEEE VIS 2025 (Vienna, Austria)

QnAbot

- Built transformer-based chatbot (PyTorch) for textual comprehension, incorporated retrieval to answer questions
- Deployed on CoLab/HuggingFace using Bert Transformer Model
- Ranked 82nd globally in SQUADV2 NLP Competition by Stanford University

SKILLS

Programming: Python, Java, JavaScript, CloudSQL, Swift, OCaml, R, Groovy, C#, VB, C++, MATLAB, Go
Frameworks/Libraries: TensorFlow, PyTorch, Pandas, Keras, Scikit, Node.JS, Angular, Django
Tools: AWS, Azure, Google Cloud Platform, APIs, Docker, Kubernetes, Agile Scrum, Git, Spark

EDUCATION

University of Minnesota **Dean's List 7x**
M.S. Computer Science – Emphasis in Machine Learning (4.0 GPA) *Mar '26*

- **Coursework:** Natural Language Processing, Applied Machine Learning, Computational Genomics, Computer Vision, Neural Networks, Distributed Computing And Systems

B.S. Computer Science – Minors in Neuroscience & Math (3.48 GPA) *May '23*

VOLUNTEERING AND MORE

Volunteer Football Coach, St. Louis Park High School Football Team

- Assistant Defensive Backs Coach, Analytics Lead, led division in forced turnovers

Self-Hosted Media Backup Server, DNS-Based Adblocker