Evan Pochtar

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Education

University of Minnesota – College of Science and Engineering **September 2022 - May 2024**

Bachelor of Science, Computer Science | GPA: 3.9/4.0 *Twin Cities, MN*

- **Details:** Started as PSEO from September 2020 – May 2022
- **Awards:** Dean's List from 2020-2024, Presidential Academic Scholarship, Graduated with Distinction
- **Relevant Coursework:** Operating Systems, Machine Learning Fundamentals, Machine Architecture and Organization, Functional Genomics and Bioinformatics, Artificial Intelligence 1, Applied Linear Algebra.

University of Minnesota – College of Science and Engineering **September 2024 - May 2025**

Master of Science, Computer Science | GPA: 4.0/4.0 *Twin Cities, MN*

- **Details:** Focus on Machine Learning, Linear Algebra, and Software Engineering.
- **Relevant Coursework:** Computer Vision, Intelligent Robotic Systems, VR and 3D Applications, Software Engineering 1 and 2, Artificial Intelligence II, Natural Language Processing, and Deep Learning.

Eastview High School – Apple Valley Minnesota **September 2018 – May 2022**

Experience

Synchrono - Manufacturing Software **May – August 2023 & 2024**

Software Engineer Intern | C#, ASPX, Typescript, VueJS, SQL, Azure, PowerShell, Python *Edina, MN*

- Engineered a Genetic Algorithm to enhance scheduling operations in an industrial context, effectively managing complex data-driven constraints.
- Designed and participated in the creation of database schema to efficiently retrieve data using SQL Server.
- Developed and maintained automated testing solutions for both webpage and backend systems using TypeScript.
- Participated in daily stand-ups, sprint planning, and retrospectives as part of an agile development team.

Abbey Care **September 2021 – Present**

Personal Care Assistant (Part-time) *Eagan, MN*

- Ensured adherence to care plans and communicated regularly with family members and healthcare professionals.
- Overcame language and location barriers while navigating rapidly changing circumstances.

Projects

Calculating Depth with Optimized Sparse Imaging Neural Radiance Fields **October 2024 – December 2024**

Python / Pytorch / NumPy / OpenCV / TensorFlow

- Developed a Neural Radiance Field model in PyTorch to create a 3D model from as few as 5-10 2D input images.
- Integrated ray casting techniques to sample points along camera rays and use alpha compositing for 3D rendering.
- Applied advanced deep learning architectures such as MLPs to novel computer vision tasks, speeding up the original Neural Radiance Field algorithm by 5.4 times.

Handwritten Math to LaTeX Recognition System **March 2025 – May 2025**

Python / NumPy / Pandas / OpenCV / Pytorch

- Built a deep learning system with 86.22% accuracy converting handwritten math to LaTeX using computer vision and natural language processing techniques.
- Fine-tuned Phi-4-mini LLM for LaTeX syntax correction using GRPO across 4 NVIDIA A40 GPUs.
- Implemented a hybrid architecture combining a pre-trained ResNet-34 CNN encoder with a 6-layer Transformer decoder (8 attention heads) for feature extraction and sequence generation.

Gene Network Analysis of Age-Associated Disorders **February 2024 – May 2024**

R / Python / HTML / JavaScript / NetworkX / Scikit-Learn

- Engineered a machine learning pipeline in R/Python to analyze RNA-seq data from 3,000+ samples, implementing regression models that identified 566 significant age-associated gene sets linked to disease phenotypes.
- Developed an interactive network visualization system using an HTML and JavaScript graph network that enables exploration of disease-gene relationships and highlights potential therapeutic targets.

Skills & Interests

Programming Skills: Python, R, Java, C#, Go, Svelte, Flask, VueJS, Typescript, Pytorch, Scikit-Learn, and Playwright.
Database Systems: SQL Server, Firebase, PostgreSQL, and SQLite.
Languages: English (native) and Russian (conversational).