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.

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).