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 **Expected Graduation May 2025**

Master of Science, Computer Science *Twin Cities, MN*

- **Details:** Planned focus on Machine Learning and Bioinformatics.
- **Relevant Coursework:** Computer Vision, Advanced Machine Learning, VR and 3D Interaction, Artificial Intelligence 2, Natural Language Processing, and Deep Learning: Models, Computation, and Applications.

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

A Comparative Study of Maze Solving and Maze Creation Algorithms **February 2024 – May 2024**

Python / NumPy

- Developed and implemented maze-solving algorithms including Genetic Algorithm, Simulated Annealing, BFS, DFS, A*, Best-First Search, and Uniform Search, alongside a random walk agent for maze generation.
- Applied knowledge from research papers, journals, and conference findings to the development of algorithms.
- Produced an in-depth technical report detailing the statistical analysis of performance metrics such as speed, memory efficiency, and algorithmic complexity.

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

R / Python / HTML / Javascript / Network / Sci-kit

- Collaborated with a team of doctorate biologists to investigate the genetic underpinnings of age-related diseases.
- Developed an interactive gene network accessible via a website, enabling visualization and exploration of gene data.
- Wrote a concise thesis paper highlighting the study's significant findings and practical implications.
- Gained hands-on experience in research, particularly focusing on machine learning techniques.

Calculating Depth with Sparse Imaging Neural Radiance Fields **August 2024 - Present**

Python / Pytorch / NumPy / TensorFlow

- Developing a Neural Radiance Field model in PyTorch to reconstruct 3D scenes from as few as 3-5 input images.
- Integrating ray casting techniques to sample points along camera rays and use alpha compositing for 3D rendering.
- Applying advanced deep learning architectures such as MLPs to novel computer vision tasks, improving my ability to handle diverse datasets and challenges.

Skills & Interests

Programming Skills: Python, Java, C/C++, C#, Go, VueJS, Typescript, Pytorch, TensorFlow, and NumPy.
Database Systems: SQL Server, PostgreSQL, and MongoDB.
Languages: English (native), Russian (conversational), Mandarin Chinese (Elementary 1st Year).