

ALEX VESEL

CS \ AI

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EXPERIENCE

Tesla

Algorithm Engineering Intern

June 2023 – September 2023 Palo Alto, CA

- Developed inertial sensing algorithms for Tesla vehicles and Tesla Bot (Optimus), including mathematical derivation and implementation
- Computer vision using deep learning models for new vehicle feature
- IMU/GNSS sensor fusion through statistical models

Research Assistant

AI for Remote Sensing

September 2023 – Present Stanford University

- Research project to create 3D exterior and interior models of buildings at scale
- Leverage computer vision techniques and optimization to extract information from floorplans and align to building exteriors modeled using satellite imagery and aerial lidar
- Experience training models on high performance computer clusters

Epic Systems

Software Development Intern

May 2021 – August 2021 Verona, WI

- Designed data visualization tool for medical lab data
- Consulted with large hospitals to develop effective UI

Kohl's

Software Development Intern

May 2020 – August 2020 Milwaukee, WI

- Developed automation tools for cloud computing VM management
- Bash scripting on Linux servers

PROJECTS

PlutusChat

Investing Research Copilot

May 2023 – Present

- Created ChatGPT-like website for retail investors to quickly learn about company SEC filings.
- Custom AI pipeline, including vector databases, semantic search, prompt tuning

Retail Investing

Value Investing and Algorithmic Trading

September 2018 – Present

- Regular searching for undervalued stocks, reading SEC filings and forecasting future earnings through fundamental analysis
- Developed algorithmic trading pipeline, from backtesting to live implementation

EDUCATION

M.S. Computer Science

Stanford University

September 2022 - April 2024

GPA: 4.115 / 4.000

B.S. Electrical Engineering and Computer Sciences

University of Wisconsin - Madison

May 2022

GPA: 3.987 / 4.000

SKILLS

Python C C++ MATLAB Java

Linux MacOS Windows

NumPy TensorFlow Keras PyTorch

Pandas Google Colab Visual Studio

PostgreSQL Cloud Computing

Prompt Tuning Vector Database

Semantic Search LoRA LLM Agents

COURSEWORK

- Algorithms
- Artificial Intelligence
- Blockchain
- Operating Systems
- Compilers
- ML under Distribution Shifts
- Digital Signal Processing
- Statistics

INTERESTS

- Guitar
- Songwriting
- Weightlifting
- Philosophy
- Psychology
- Cinema