

KOERNER GRAY-BUCHTA

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EDUCATION

UNIVERSITY OF MICHIGAN

Bachelor of Science in Computer Science

Cumulative GPA: 3.0/4.0

Coursework: Artificial Intelligence, Natural Language Processing, Evolutionary Algorithms, Complex Systems, Data Structures and Algorithms

Ann Arbor, MI

April 2026

SKILLS

PROGRAMMING LANGUAGES & FRAMEWORKS

- Python [Django, Flask, Numpy, Scipy, Matplotlib, OpenCV, Pytorch, Transformers, Langchain, Llama Index, Crew AI]
- C/C++ [STL]
- Javascript [vue.js, next.js, node, React, jQuery]
- Git and Jira, Windows/Linux/macOS
- Docker, gulp, AWS, Google Cloud Platform

RESEARCH

- Computer Vision and Robotics
- Transformers for Combinatorial Optimization
- Category Theoretic Architecture Design
- Spiking Neural Networks
- LLM-enabled R&D
- Multimodal Agentic AI

WORK EXPERIENCE

ROSE AI

Machine Learning Engineer Intern

New York City, NY

May 2024 - September 2024

- Contributed to this Bridgewater-born text-to-financial chart AI startup on a codebase written with Flask, the GPT API, Langchain and next.js
- Improved product accuracy by 15% with careful prompt engineering improvements within the first two weeks of onboarding.
- Helped transition the product from a hobbled text-to-financial-chart program to a multifunctional, multi-agentic AI copilot for data analysts

ITS GEN AI SERVICES, UM INFORMATION & TECHNOLOGY SERVICES

Computer Consultant

Ann Arbor, MI

July 2023 - October 2023

- Helped build UM's groundbreaking native generative AI services with Langchain, Django, and vue.js
- Added tested front-end features tracked with Jira in collaboration with UX/UI designers and cybersecurity team members

IMAGE-GUIDED MEDICAL ROBOTICS LAB, UNIVERSITY OF MICHIGAN

Research Assistant, I

Ann Arbor, MI

Jan 2023 – Present

- Collaborated with graduate students and professors to create an intelligent, Robotically-aligned OCT scanning system
- Created high-dimensional visualizations with matplotlib for conference and journal papers
- Optimized the regularly-called path-planner/TSP solver function for a speed-up of 26%, contributing to the project's 5x greater frame rate than standard OCT systems
- Trained a pytorch Transformers-based computer vision model on the University's Slurm cluster

UNIVERSITY PROJECTS

SELF-TRACKING AI ASSISTANT

January 2024

- Built an LLM-enabled system that integrates and summarizes multimodal self-tracking data. Uses Langchain, Cohere, Dash.

GPT-BASED CALL LOG SUMMARIZER

March 2023

- Deployed a RAG system on Render with Streamlit and GPT for querying meeting transcripts for up-to-date information about the latest product decisions, using prompt engineering to make later decisions take precedence over earlier ones.