# KOERNER GRAY-BUCHTA

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## EDUCATION

**UNIVERSITY OF MICHIGAN** <span style="float:right">Ann Arbor, MI</span>

Bachelor of Science in Computer Science <span style="float:right">April 2026</span>

Cumulative GPA: 3.0/4.0

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

## 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

### 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** <span style="float:right">New York City, NY</span>

Machine Learning Engineer Intern <span style="float:right">May 2024 - September 2024</span>

- 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.

**ITS GEN AI SERVICES, UM INFORMATION & TECHNOLOGY SERVICES** <span style="float:right">Ann Arbor, MI</span>

Computer Consultant <span style="float:right">July 2023 - October 2023</span>

- 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** <span style="float:right">Ann Arbor, MI</span>

Research Assistant, I <span style="float:right">Jan 2023 – Present</span>

- 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** <span style="float:right">January 2024</span>

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

**GPT-BASED CALL LOG SUMMARIZER** <span style="float:right">March 2023</span>

- 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.