

# KOERNER GRAY-BUCHTA

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## EDUCATION

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### UNIVERSITY OF MICHIGAN

Bachelor of Science in Computer Science

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

Ann Arbor, MI

April 2026

## SKILLS

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### 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
- Robotics
- Transformers
- Signal Processing
- LLMs
- Multimodal AI

## WORK EXPERIENCE

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### UNIVERSITY OF MICHIGAN

Research Assistant

Ann Arbor, MI

January 2023 - present

- Trained a NAR4TSP Transformer-based computer vision model to solve a path-planning problem for a robotically-aligned OCT based ophthalmic robotics system for Dr. Draelos of the Image-Guided Medical Robotics Lab, published at ARVO and in Biomedical Optics Express
- Worked under Radiologist Dr. Zhou in the CAD-AI lab, using AI to tabularize unstructured medical record data from a myeloma study. Developed a prompt-engineered solution with pre-trained open source LLMs and fine-tuned clinical t5 for the text-to-table task for comparison.
- Worked under Dr. Bisgin of MIDAS to improve his XGBoost-based method for classifying Android app security risks. Adapted deep learning methods (Excellformer, PyTorch Frame) to compete with GBDT solutions. Used LLMs to provide interpretations of model predictions for explainable AI.
- Trained a PointNet model to solve a cross-modal CryoEM microscopy correlation problem for Dr. Fung of the UM Life Sciences Institute

### 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