Kody Takada

ktakada@umich.edu | +1(248)385-6126 | kodyt.github.io | Ann Arbor, MI

EDUCATION

Master of Science in Engineering (M.S.E), Computer Engineering
University of Michigan – College of Engineering, Ann Arbor, MI — August 2024 – May 2025
GPA: 3.70/4.00
Area of Specialization: Signal & Image Processing and Machine Learning

Bachelor of Science in Engineering (B.S.E), Computer Science/Minor in Chemistry
University of Michigan – College of Engineering, Ann Arbor, MI — August 2020 – May 2024
GPA: 3.76/4.00

SKILLS

Programming Languages: C++, C, Python, HTML, CSS, JavaScript, Typescript, MATLAB, R, ARMv8, Julia
Tools: Git, ReactJS, Flask, Hadoop, SQL, Jupyter, AWS, Shell Scripting, Jenkins, AGILE, Scikit-learn, NumPy, Microsoft Suite

WORK EXPERIENCE

General Motors — **Austin, TX**
Software Engineering Intern — *May 2024 – August 2024*
- Built an internal Python package leveraging GeoPandas and PySpark for efficient geospatial data visualization and analysis, handling over 6 million static datapoints within Jupyter.
- Designed the frontend application using ReactJS integrating cloud-based datasets with customizable base maps, supporting data scientists with comprehensive analytical tools, and reduced commercial licensing costs by $500,000.
- Engaged in biweekly Agile sprints, utilizing iterative planning to enhance workflow efficiency and ensure deliverable completion within cross-functional teams.

Cruiter.AI — **Sunnyvale, CA**
Data Analytics Intern — *May 2023 – August 2023*
- Created a machine learning regression model focused on calculating expected salary of tech candidates using Python based on personal attributes for our clients to find the optimal tech talent.
- Developed a normalization algorithm to join data for 600,000+ item datasets using RegEx and fuzzy matching.
- Analyzed and built figures to model the datasets using Seaborn to determine trends for future data ingestion.

The Glotzer Group — **Ann Arbor, MI**
Software Intern — *May 2022 – August 2022*
- Implemented a relative angular distance algorithm for our in-house Python package resulting in the reduction of neighbor-list calculations for nanoparticle simulations by over 40%.
- Adjusted the command line interface in the Python package to achieve readable output for simulation properties and improved testing readability along with comprehension using pytest.

Sling Health — **Ann Arbor, MI**
Development Team Lead — *August 2023-Present*
- Developed a mobile app to monitor UofM patients' symptoms and side effects for the outpatient cancer treating setting to facilitate more efficient patient-provider communication and insight and clinical decision making.
- Established operational objectives and work plans and delegated assignments and projects to team members.
- Handled continuous project monitoring and management, including developing HIPAA safe designs and tools.

PROJECTS

Search Engine | *Python, JavaScript, Hadoop, HTML/CSS*
- Designed a scalable search engine in Python, incorporating RESTful API practices to deliver accurate search results based on user queries through page analysis and tf-idf calculations.
- Calculated an inverted index of pages with Hadoop to enable efficient retrieval for improved search performance.

Movie Rating Classifier | *Python, scikit-learn, NumPy, pandas, gensim*
- Analyzed Amazon's movie review dataset to train Support Vector Machines for rating classification, demonstrating expertise in feature extraction, hyperparameter tuning, class imbalance handling, and bias identification.

Instagram Copy | *Python, JavaScript, HTML/CSS, AWS, SQLite*
- Created an SQLite backed Instagram application with dynamic pages in AWS. Using REACT, the copy uses the custom REST API giving the user all the functionalities of Instagram including user authentication.

ACTIVITIES

Sling Health at the University of Michigan, *Managing Director* — *April 2023-Present*
Engineering Center for Academic Success, *Computer Science Tutor* — *June 2023-June 2024*
American Institute of Chemical Engineers, *Secretary* — *August 2021-June 2023*
Mars Rover Project Team, *Science Team Member* — *August 2021-August 2022*