Joshua Pickard

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EDUCATION

University of Michigan   Ann Arbor, MI | **2019-Current**

Master of Science in Computational Medicine and Bioinformatics, Spring 2023.

B.S.E. in Computer Science and Mathematics, Spring 2022. GPA: 3.68/4.00

Relevant Course Work: Signal Processing, Machine Learning, Artificial Intelligence, Computer Security, Computer Vision, Advanced Linear Algebra, Combinatorics, Statistics

Biomedical & Clinical Informatics Lab, *Research Scientist*   Ann Arbor, MI | **Current**

- Studied tensor factorization to represent structured, high dimensional feature spaces
- Utilized tensor based algorithms in detection problems in multiple domains including intelligent fault diagnosis of ball bearings and analysis of physiological signals

Woods & King Labs, *Research Scientist*   Ann Arbor, MI | **Current**

- Modeled intrahospital patient transfer patterns using multi-order Markov models
- Simulated transmission dynamics of VRE, an antibiotic resistant bacteria common in healthcare settings, using modifications of the Gillespie algorithm

Michigan Institute of Data Science, *Instructor*   Ann Arbor, MI | **Summer 2021**

- Taught programming lectures to introduce supervised and unsupervised machine learning models to clinicians, faculty, and biomedical researchers at Michigan Medicine

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WORK EXPERIENCE

Caterpillar, *Software Engineering Intern*   Chicago, IL | **Summer 2021**

- Full stack developer for a Test Data Management product, which is used to generate and ingest data to multiple backend services to streamline software validation
- Winner of the intern hackathon, where my team and I proposed and designed a new customer facing service, which we presented to the Caterpillar leadership team

Motorola Solutions, *Software Engineering Intern*   Chicago, IL | **Summer 2020**

- Developed a feature for emergency dispatchers to play prerecorded audio messages on thousands of radio, cellular, or digital devices individually or simultaneously
- Utilized Concourse and Artifactory to create a repository of over 20 audio files that are used during each build of the application, which allows for effective CI/CD development
- Integrated the tone feature with the preexisting program that plays live audio

Exegistics, *Warehouse Logistics Intern*   Chicago, IL | **Summer 2020**

- Worked on a semiautomated shipping and sorting floors to help the warehouse receive, sort, and ship over 80,000 individual packets per day

Camp Ramah, *Counselor*   Conover, WI | **Summer 2019**

- Lived in a cabin with 20 kids including nonverbal children with special needs for 8 weeks

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AWARDS and EXPERIENCES

Math DRP Seminar Speaker on Random Walks   University of Michigan | **2020**
Arts Engine Microgrant Recipient   University of Michigan | **2019**

Skills: Python, MATLAB, C/C++, Java, R, Go, JavaScript, Microsoft Office, Manual Labor