Michael Dick

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EDUCATION

University of Michigan - Ann Arbor
Bachelor of Science in Engineering - Computer Science, Mathematics Minor   *Expected: May 2024*

- GPA: 3.62/4.00
- **Relevant Coursework:** EECS 498 (Game Engine Architecture), EECS 442 (Computer Vision), EECS 471 (GPU Programming), EECS 483 (Compilers), EECS 281 (Data Structures and Algorithms), EECS 370 (Computer Architecture), ROB 102 (Intro to AI programming), MATH 425 (Probability), MATH 423 (Mathematical Finance)
- **Organizations and Activities:** IT Council Student Representative, First Generation Engineers, Michigan Student Artificial Intelligence Lab, UROP (Undergraduate Research Opportunity)

EXPERIENCE

Amador Bioscience
Ann Arbor, Michigan
Software Engineer   *January 2023 - Present*

- Developed and launched 'APMX', an open-source R package designed to simplify data cleaning and formatting for PK/PD analysis, making it easier to use in NONMEM. This tool was presented at the PAGE conference in Spain.
- Implemented a testing suite using automated unit tests to ensure our code was consistently accurate and reliable. This included checking calculations and formatting with snapshots of processed data, which greatly improved the quality and dependability of our software.
- Took on a key role in coding and enhancing various functions within APMX, focusing on user-friendly features and efficient data processing. My contributions helped make complex data sets more manageable and interpretable for users.

Ann Arbor Pharmacometrics Group
Ann Arbor, Michigan
Software Engineer   *May 2022 - December 2022*

- Developed a Noncompartmental Analysis tool to assist pharmacometricians in generating exploratory plots, tables, listings, and figures. The tool facilitates easy data input and editing, allowing users to eliminate unwanted outliers. Built using R, R-Shiny, HTML, SASS, and JavaScript.
- Containerized the developed application using Docker, enhancing accessibility across various operating systems and environments, thereby making it widely available to users.
- Deployed the containerized application on Amazon Web Services using the Elastic Container Service, ensuring accurate configuration of environments and execution paths for reliable R code operation and application launch.
- Streamlined the graph rendering process, significantly reducing the rendering time from 5 seconds to 1 second. Achieved this optimization by implementing efficient caching methods to accelerate the generation of a series of graphs.

Rackham Graduate School - University of Michigan
Ann Arbor, Michigan
Undergraduate Researcher   *October 2019 - September 2020*

- Utilized Adobe Animate, Audacity, Adobe Premiere Rush, and Adobe Illustrator to create an educational animation. The project was based on the research paper: "The Mentor's Dilemma: Providing Critical Feedback Across the Racial Divide" by G. Cohen, C. Steele, and L. Ross.
- The animation, aimed at incoming graduate students, highlights the importance of feedback in academic settings and its intersection with racial dynamics.
- Collaborated closely with Professor Adam J. Matzger, who guided the project, to explore effective presentation mediums and strategies for disseminating research findings.

SKILLS SUMMARY

- **Languages:**   C/C++, CUDA, Rust, Python, R, JavaScript, HTML, CSS, SQL, C#
- **Tools:**   Git, LaTeX, GNU Makefile, AWS (Amazon Web Services), Docker
- **Frameworks/Libraries:**   SDL/SDL2, ASP.NET, React, OpenGL, R-Shiny, Numpy, OpenCV