Nithisha Nantha Kumar

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EDUCATION

University of Michigan | College of Literature, Science, and the Arts   **Ann Arbor, MI**
Bachelor of Science (Computer Science)   *April 2024 (expected)*

- **GPA:** 3.84/4.0 (Four-Time University Honors)
- **Course Highlights:** Data Structures & Algorithms, Web Systems (REST APIs, JavaScript, ReactJS, SQL, AWS), Computational Machine Learning (Julia/Python), Computer Organization, XR and Society (Jira/Unreal Engine/Unity)

RELATED EXPERIENCE

Amway   **Ann Arbor, MI**
Software Development Project Member (CloudVision Project Team)   *Jan 2023 - present*

- Developing an application to manage and process clinical scans of facial images using Amway's existing Amazon Web Services (AWS) platform.
- Documenting code on Amway's GitHub and coordinating tasks using Jira as a member of a multi-disciplinary team.

University of Michigan College of Engineering   **Ann Arbor, MI**
Instructional Aide for XR Software Development (EECS 498)   *Jan 2023 – present*

- Assisting faculty to teach a class of about 100 students by holding weekly office hours to explain and demonstrate programming methods for projects in Unreal/Unity and answering questions on Piazza.

University of Michigan Transportation Research Institute (UMTRI)   **Ann Arbor, MI**
Software Engineering Intern   *Sep 2021 – Dec 2022*

- Developed an AR Android/iOS mobile app with Unity3D/C# using accurate 3D statistical body shape models with optimal data structures and algorithms.
- Tested the app to ensure accuracy of body shape measurements in the real-world environment for use in automobile engineering and medical areas.
- Won the *Blue Ribbon Award* for exceptional presentation of the app during the Spring 2022 Undergraduate Research Symposium at the University of Michigan and third place in the 2022 UMTRI Summer Research Poster Contest.

The Michigan Daily   **Ann Arbor, MI**
Managing Video Editor   *May 2022 – August 2022*

- Managed a team of 10+ videographers and gave feedback on their content to make it more appropriate for the Daily.
- Won the *Exceptional Journalism Honor in Multimedia Reporting* in the 2021 Better Newspaper Competition held by the Michigan Press Association for *"Why are South Indian Actresses Not Represented Enough in South Indian Film Industries?"*. This video received over 250k views and gained the Daily's channel over 2k subscribers.

INDEPENDENT RESEARCH PROJECT

Islamic Star Pattern Animator
Adobe After Effects Plugin   *Jul 2021 – Aug 2021*

- Coded an Adobe After Effects plugin in C++ called *Pattern* that creates Islamic star pattern motion graphics using Hankin's polygons-in-contact algorithm. *Pattern* is based on the University of Waterloo research paper *Islamic Star Patterns from Polygons in Contact* by Prof. Craig S. Kaplan.
- Developed an algorithm to generate patterns that is faster than the algorithm used in the paper. This algorithm was recognized and appreciated by Prof. Kaplan.
- Used OpenCV's k-means clustering machine learning algorithm to auto-generate color palettes for animations from a dataset of images illustrated by professional animators at *Kurzgesagt* (a popular German animation studio).
- Won a $150 award in the 2021 Science as Art Contest held by the University of Michigan ArtsEngine for this project.