Akik Kothekar

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EDUCATION

University of Michigan, College of LS&A

Ann Arbor, MI

Bachelor of Science in Computer Science. Cumulative GPA- 3.2 EECS GPA- 3.53 Relevant Coursework-

Aug. 2017 - May 2021

Email: akik@umich.edu

- EECS 183: Elementary Programming Concepts
- EECS 280: Programming and Introductory Data Structures
- o **EECS 203**: Discrete Math
- EECS 281: Data Structures and Algorihms

Singapore International School

Mumbai, India

IB Diploma; Points: 36/45 (A in Mathematics Extended Essay)

Aug. 2015 - April. 2017

Computer Science Projects

Successive Over-Relaxation Solver for Linear Systems Research Project under the mentorship of a Mathematics Professor

Indian Institute of Technology, Bombay

April 2016 - August 2016

The Research project was an effort of over 100 hours including about 45 hours of discussion with the professor. I explored the various iterative methods to solve linear systems and why iterative methods are more efficient than inverting a matrix. I had to learn mathematical concepts such as maximal norms to carry out convergence analysis. The algorithms were used to solve large matrices such as the poisson matrix.

Forum Post Classifier Software

Ann Arbor, MI

A project involving machine learning and Natural Language Processing

March, 2018

Developed a C++ program to automatically classify forum posts on Piazza.com, using Machine Learning and Natural Language Processing techniques. Trained the "Multi-Variate Bernoulli Naive Bayes NLP Classifier" for analysis of words using probability scores and a binary search tree data structure.

Using technology to reduce high school drop-out rates in rural India

Mumbai, India

Project was acknowledged by the Human Resource Development Ministry of India

Jan 2016 - August 2016

Developed an IT and computer devices based model that will improve the quality of education in schools across rural India and make it free of cost. I published an article - 'An Open letter to the Prime Minister of India from A Teenager', in the Economic Times of India to bring the issue and the solution to the attention of the Prime Minister of India

People's Choice Award for Best Project- Micro Arcade

Ann Arbor, MI

Chief of Software

November, 2017

Our gaming console 'Omega' was voted as the best project out of 400 other projects by representatives from Facebook, JP Morgan and Chase and the EECS 183 professors. The console consisted of an arduino uno at its core. We developed the game 'Space Invaders' for this console.

Image Seam Carving Algorithm

Ann Arbor, MI

Algorithm to change the aspect ratio of images without distorting their content

January, 2018

Developed a C++ algorithm for content aware resizing of images. Processed the images using matrices and PPM image modules along with drivers in Linux Shell

Additional

- Technical Skills: C++, Python, JAVA, Linux Shell, Git, MATLAB, SciLab, LaTex, Arduino
- Squash: Ranked 38th in India. Participated in national level tournaments
- Michigan Squash Club: Started the first squash club at the University of Michigan in my freshman year.
- SIS Computer Science Club: Started the computer science club in my high school.