Akik Kothekar
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Education

University of Michigan, Ann Arbor **Sep 2017 – May 2021**

- B.S.E in Computer Science, GPA: 3.3/4.0
- Relevant Coursework- Data Structures and Algorithms, Computer Security, Artificial Intelligence, Web Development, Discrete Mathematics, Applied Linear Algebra, Computer Organization, Probability and Statistics.

Experience

Lenskart – Face Shape Classifier **Bangalore, India**
Research and Software Engineering Intern ***May 2019 – Aug 2019***

- Developed an efficient algorithm to classify a face into one of six shapes for Lenskart, a leader in selling eyewear online in India and is valued over a billion dollars.
- The algorithm is part of a larger recommendation system that would recommend eyewear based on one's face shape.
- Researched trends in facial features of over 500 images using the Face++ Landmarks API to come up with an efficient algorithm and retrained the Inception v3 model for a machine learning approach to the problem.

Interactive RFID – Research **University of Michigan, Ann Arbor**
Professor – Dr. Alanson Sample ***Jan 2019 – Present***

- Researching ways to use RFID tags as cheap, paper thin, battery free, and ultra-low-cost sensors by monitoring changes in the communication between the tag and the reader.
- Developing libraries to use this technology for passive activity inferencing, interactive physical objects, and human robot interaction.

Successive Over-Relaxation Solver for Linear Systems – Research **Indian Institute of Technology, Mumbai**
Professor – Dr. S. Baskar ***April 2016 – Aug 2016***

- Explored various iterative methods to solve linear systems, which is the core concept of dealing with graphics in a Computer System.
- Studied numerous mathematical concepts such as maximal norms that allowed me to conclude that the iterative algorithms are much more efficient than their alternatives.

Projects

Forum Post Classifier Software **University of Michigan, Ann Arbor**
Machine Learning and Natural Language Processing ***March 2018***

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

Algorithms to Solve the Travelling Salesman Problem (TSP) **University of Michigan, Ann Arbor**
Algorithm Optimization Project/problem ***Nov 2018***

- Developed a C++ program to carry out an optimal tour of the given locations.
- Used Prim's Minimal Spanning Tree algorithm to implement a branch and bound approach for efficient pruning.
- Explored various heuristics such as arbitrary insertion which generated a TSP prioritizing faster run time over accuracy.

Arduino Micro Arcade **University of Michigan, Ann Arbor**
Gaming console made with an Arduino Uno **Nov 2017**

- Developed the arcade game "Space Invaders" for our Arduino console.
- Voted best project among 400 other projects, by representatives from Facebook and JP Morgan and Chase.

Technology to Reduce High School Drop-Out Rates in Rural India **Mumbai, India**
Community outreach initiative using CS ***Jan 2016 – August 2016***

- Developed a technology-based model to make education in rural India better and free of cost.
- Published an article - 'An Open letter to the Prime Minister of India from A Teenager', in the Economic Times of India.
- Project was acknowledged by the Human Resource Development Ministry of India.

Skills and Interests

Technical Skills- C++, Python, C, Java, JavaScript, React, Flask, HTML, Linux Shell, Git, MATLAB, Arduino
Languages- Fluent in English, Hindi, and Marathi
Michigan Squash Club- I represent Michigan in Squash Tournaments as the No.2 seed and mentor beginners.