SIDDHARTH DHAR
6 Carey Street Pennington, NJ 08534 | Email: sid.dhar002@gmail.com| Cell: (609) 375-5661

PROFESSIONAL INTRODUCTIONS

Analytical and diligent **Sophomore majoring in Computer Science at University of Michigan, Ann Arbor** seeking an opportunity to leverage Computer Science and Data Analytics skills to contribute and learn as an intern during summer. Varied experience working on both technical and business/product teams' data modeling and ETL.

SUMMARY OF SKILLS

- Completed Java Programming Step by Step with 200+ code examples (through Udemy)
- Basic understanding of Swift iOS Development: iOS 13 & Swift 5 - The Complete iOS App Development Bootcamp on Udemy
- C++ through relevant coursework: EECS 183 and EECS 280 at the University of Michigan.
- Working knowledge of Python and SQL
- Advanced proficiency in Excel, PowerPoint and Word
- Have worked on AWS services such as S3, EC2, Redshift and Sagemaker,

EDUCATION

1. **University of Michigan, Ann Arbor, MI**
   Degree: Bachelor of Computer Science **Expected Graduation Date: May 2024**
   GPA:3.48
   Relevant Courseware:
   - Math 116 (Calculus 2)
   - EECS 183 (Basics of C++ and Python)
   - EECS 203 (Discrete Mathematics)
   - EECS 280 (Techniques and algorithm development and effective programming)
   - EECS 281 (Data Structures and Algorithms)

Projects Completed (Code available upon request):

- **Seam Carving Algorithm**: A computer vision algorithm capable of resizing images using Seam Carving. Seam carving is a technique for content-aware resizing of images". The end result is that we can resize images in a way that changes the aspect ratio but does not distort the image.In this project, we had work with pointers, arrays, structs, strings, and I/O operations, as well as C-style "object-based" programming.
- **Euchre**: Euchre is a trick-taking card game popular In Michigan. In this project we used abstract data types and object-oriented programming.
- **ML classifier:** A basic machine learning algorithm that can classify Piazza posts into different topics based on the contents of the post. Classifier could be trained with large data sets and would classify based on the "bag of words" model.
- **Route finder:** Given a text file of a map, the algorithm uses the Stack and Queue data structure to find a path to a destination given constraints.
- **Zombie game**: A certain number of zombies and maximum arrows shot per round are passed in as arguments. The program simulates a battle and determines whether the player would survive. Uses a priority queue to determine the order in which zombies are shot. Also implemented binary heap and pairing heap.

- **Log Manager:** A log file can be passed in as an argument. Using this log file, entries can be queried using specific timestamp, category keywords, and message keywords. Uses a hash table to store entries with given parameters.
- **TSP and MST finder**: Implemented algorithm to find an MST (Minimum Spanning Tree) or cycle given a graph. The most optical cycle can be found using a branch and bound algorithm. A non-optimal yet relatively short tour can be found using a Random Insertion Heuristic

2. Hopewell Valley Central High School, Pennington, NJ June 2020

WORK AND RESEARCH EXPERIENCE

1. June 2021 to Aug 2021 – Software Development intern at Sony Music, NY

- Designed an ETL pipeline using Managed Workflows with Apache Airflow
- Pipeline would grab data from the data lake, and load into Redshift database. Then Sagemaker would run predictions on data set. Finally, the predictions were analyzed using SQL scripts.
- Worked with AWS services such as S3, EC2, Redshift, Sagemaker, and more.
- Coded in Python and SQL
- Collaborated with team and participated in design reviews where details of pipeline were discussed

2. June 2016 till June 2019 Assistant Manager, Grader and Teacher at Kumon Learning Center, Lawrenceville, New Jersey

- Helped students learn Math and English
- Observe students and provide feedback and encouragement to promote good studying habits.
- Grade work and help students progress to the next level of competence
- Talk to parents of students and answer questions in order to discuss strategy for improvement
- Completed administrative work such as inputting scores into computer system and answering phones.

COMMUNITY SERVICE

- Aug 2016 to January 2020: Volunteer at Saint Lawrence Rehabilitation Center, Lawrenceville, NJ
  - Bring patients to therapists
  - Assist therapists administer exercises to patients