Ibrahim Rupawala

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EXPERIENCE

Western Digital Technologies Milpitas, CA
Staff Software Engineer Jan 2018 – Present

- Development and Optimization of Error Correction Code Algorithms for enterprise level solid-state drives.
- Integration and validation of media system algorithms and architecture for next generation products.
- Performance Modelling of the solid-state drives to evaluate performance and analyze trade-offs.
- Develop and automate reliability test data collection, parsing, cleaning and visualization with Python.
- Optimize performance, endurance, reliability of solid-state drive (SSD) products for the target markets.

Micron Technologies Milpitas, CA
Engineering Intern May 2017 - Dec 2017

- Define and develop system and memory diagnostic software tools.
- Write software to verify and reproduce system wide software failure modes.
- Design and implement automation for System Level testing.
- Design, develop, test, and release software related to the Factory Automation software architecture.

Arizona State University Tempe, AZ
Teaching Assistant Oct 2016 - May 2017

- Helped students in performing lab assignments using cadence environment for the course Analog & Digital Circuits.

EDUCATION

Master of Science Arizona State University, Tempe
Electrical and Computer Engineering Jan. 2016 – Dec. 2018

Bachelor of Engineering Gujarat Tech University, India
Electronics Engineering June. 2009 - May 2013

SKILLS

Languages: Python, C/C++, Javascript
DataBases: Postgre SQL, MongoDB, Cassandra
Packages: Node.js, Pandas, Numpy, Matplotlib, Scikit
Tools: Visual Studio Code, Express, Matlab, React, JIRA, Git, Jupyter Notebook, Matlab
Courses: Data Structures and Algorithms, System Design, Computer Architecture, OOP Design, Operating Systems

PROJECTS

Phi X174 Genome Sequence Assembler: Developed an assembler to recreate Genome Sequence from 100 nucleotides long 5386 error prone reads using Hamiltonian and Eulerian Path in Overlap Graph and DeBruijn Graph respectively.

Advanced Shortest Paths Algorithms: Implemented Contraction Hierarchies Algo that results in 1000 times faster query performance compared to Dijkstra's algo on graphs for road networks. Also Implemented Bidirectional Djikstra, A-Star Algo's.

Twitter Sentiments Analysis: Trained Naive Bayes classifier Model to predict sentiment from thousands of Twitter tweets. Performed tokenization to tweet text using Scikit Learn. Performed data cleaning and removed punctuation and stop words.

Facial Expression Recognition using Keras: Build and trained CNN from scratch to recognize facial expressions. The objective is to classify each face into one of seven categories (Angry, Disgust, Fear, Happy, Sad, Surprise, Neutral).

Restaurant NLU Chatbot with Rasa and Python: Developed a Chatbot using ZOMATO API which can answer questions and can search restaurant, make reservations, validate cuisine, etc. Trained the NLU Model and validated responses