

# IBRAHIM RUPAWALA

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## EDUCATION

**Master of Science, Electrical and Computer Engineering**

**Dec 2017**

Arizona State University, Tempe, USA

**Bachelor of Engineering, Electronics Engineering**

**May 2013**

Gujarat Technological University, Gujarat, India

## TECHNICAL SKILLS

**Programming Languages:** Python, C++

**Database Technologies:** Postgre SQL, MySQL, MongoDB

**Frameworks & Packages:** Node JS, Pandas, Numpy, Matplotlib, Scikit

**Tools & Technologies:** Visual Studio Code, Express, Matlab, React, JIRA, Git, Jupyter Notebook, Matlab

**Related Coursework:** Data Structures and Algorithms, System Design, Computer Architecture, OOP Design, Operating Systems

## WORK EXPERIENCE

**Staff Software Engineer, Western Digital Technologies, Milpitas, CA**

**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 to evaluate performance and analyze trade-offs.
- Develop and automate reliability test data collection, parsing and visualization with Python.
- Optimize performance, endurance, reliability of solid-state drives products for the target markets

**Engineering Intern, Micron Technologies, Milpitas, CA**

**May 2017 - Dec 2017**

- Define and develop diagnostic software tools. Design and implement automation for system level testing.
- Write codes to verify and reproduce system wide software failure modes.
- Design, develop, test, and release software related to the factory automation software architecture.

**Graduate Teaching Assistant, Arizona State University, Tempe, AZ**

**Oct 2016 - May 2017**

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

**IC Design Intern, Analog Rails, Tempe, AZ**

**May 2016 - Jul 2017**

- Designed standard cell library and performed characterization of the cells. Performed RTL verification of the cells.
- Characterized standard cell library creating models for delay, constraints, and power that efficiently model cell behavior.

## 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 Dijkstra, 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 in Keras 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.

## ACHIEVEMENTS

- Gold Medal for Consistent Academic Performance by Gujarat Technological University, India
- Merit based award for Outstanding Academic Performance by Ministry of HR Development, India
- Outstanding Teaching Assistant Award and Tuition fees waiver by Arizona State University, USA
- MVP and Platinum performance Awards by Western Digital Technologies