**Ibrahim Rupawala** ibrahimrupawala@gmail.com

San Jose, CA [LinkedIn](https://www.linkedin.com/in/irupawala/), [GitHub](https://github.com/irupawala)

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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 AssistantOct 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**](https://github.com/irupawala/Projects/tree/main/Phi%20X174%20Genome%20Sequence%20Assembler)**:** 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**](https://github.com/irupawala/Projects/tree/main/Advanced%20Shortest%20Paths%20Algorithms)**:** 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**](https://github.com/irupawala/Projects/tree/main/Twitter%20Sentiments%20Analysis)**:** 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**](https://github.com/irupawala/Projects/tree/main/Facial%20Expression%20Recognition%20using%20Keras)**:** 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**](https://github.com/irupawala/Projects/tree/main/Restaurant%20NLU%20Chatbot%20with%20Rasa%20and%20Python)**:** 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