Akash Gujarathi

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EDUCATION

State University of New York, Binghamton — May 2020
Master of Science in Computer Science | **GPA: 3.70/4.00**
Technical Courses: Programming for the Web, High Performance Computing, Design and Analysis of Algorithms, Programming Languages

Pvgs' College of Engineering and Technology, Savitribai Phule Pune University, India — May 2017
Bachelor of Engineering in Information Technology | **Grade: First class with distinction**
Publication: Competent K-means in Smart and Effective E-commerce, Published in (ASIC, Volume 668, pp 235-242) Springer, Singapore

WORK EXPERIENCE

Graduate Student Assistant, International Student and Scholar Services (ISSS) | Binghamton, NY — August 2019 - May 2020
- **Reduced memory utilization by 10% by redesigning old SQL queries** to remove redundancy in database
- **Improved user interface** of website by migrating old website to new template

Graduate Student Intern, International Student and Scholar Services (ISSS) | Binghamton, NY — April 2019 - August 2019

PROJECTS EXPERIENCE

Full Stack Development: Personal Blog- Babel | Node.js | Express.js | MongoDB | AWS EC2 | NPM — May 2020
- Built a personal blog site using React.js, JavaScript, JXS, CSS3, HTML on **front-end**
- Developed a **backend server** with Node.js, built **Restful APIs** with **Express.js** and tested with **Postman**
- Used GitHub to clone the website on AWS EC2

Front End Development: React TodoList App- CSS3 | JavaScript | HTML — February 2020
- Created a TodoList application on **react framework** served Http request to manage to-do list items using Axios
- Utilized **lifecycle method** to add initial data and rendered props to insert multiple components
- Managed application path using **react-router**

Back End Development: Sensor Data Web Applications- Node.js | REST API | MVC — August 2019 - December 2019
- Built a sensor data searching web application with **Express.js** and **MongoDB** database
- Served **Http request** using axios to **MongoDB** server and displayed results with mustache templates
- Scripted asynchronous **JavaScrip**t functions to perform CRUD operations on sensor database

API Scrapping: Reddit Data Scraper**-** Web Scraping | Big Data Analysis | Data Pipeline — September 2019 **-** November 2019
- Used Reddit's API with the **OAuth2 protocol** to gain access to Reddit's data
- Deployed a Python server to scrape data from Reddit for period of 2 months and stored in **PostgreSQL** database
- Analyzed 3 news subreddits with spaCy **python** package to display top 10 trending topics discussed in different states in the USA

Datamining: E-commerce big-data analysis**-** Data Clustering | Machine Learning — August 2019 - December 2019
- Processed food-mart's one year of sales transactions and designed **k-means algorithm** to point out failed and rich promotion
- Stored data in **Hadoop** distributed file system and used **MapReduce resulting decrease of processing time by 90%**
- Created dashboard using **Java** to display annual statistics

Parallel Computing: Parallel K-nearest neighbors- Multi-threading | Optimization — March 2019 - April 2019
- **Trained and queried 1 million points** in arbitrary dimensions with k-dimensional tree and priority queue as data structures
- **Achieved 4 times faster execution** by parallelizing system with C++11 threads

TECHNICAL SKILLS

- **Web Technologies:** Node.js, React.js, HTML5, CSS3, jQuery, Express.js, AJAX, SOAP, RESTful APIs, OAuth2, Axios, Redux, Php
- **Programming Languages:** JavaScript ES6, Python, Java, C++, C
- **Database:** MongoDB, PostgreSQL, MySQL, Mongo Atlas
- **Additional:** Basic Testing, Linux, MacOS, Open Source Tools, Basic Multi-Threading, Babel, Basic AWS EC2

VOLUNTEERING AND LEADERSHIP EXPERIENCE

School Captain: Acted as a mediator between students and school management, planned all cultural and social events
Social Cause: Volunteered in city cleanliness drives conducted by school