# Varad Bhogayata

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## Education

**Arizona State University, USA** January 2021 – December 2022
Master of Science in Computer Science GPA: 4.0/4.0
**Relevant Coursework**: Cloud Computing, Distributed Database Systems, Foundations of Algorithms

**Ahmedabad University, India** July 2014 – May 2018
Bachelor of Technology in Information and Communication Technology GPA: 3.13/4.33

## Skills

**Languages**: Python, Java, JavaScript, C, C++, HTML/CSS, Bash

**Databases**: MySQL, PostgreSQL, MongoDB

**Libraries**: NumPy, Pandas, OpenCV

**Frameworks**: Flask, Django, Node.js, Keras, TensorFlow, PyTorch, Bootstrap, Apache Beam

**Tools & Technologies**: Git, Docker, AWS, GCP, Heroku, JIRA

## Experience

**Zhi y** July 2020 – November 2020
Software Engineer
- Developed and managed the backend of an e-commerce platform using Flask, MongoDB, and AWS.
- Worked on three web applications targeting customers, selling vendors, and admin users; built 50+ RESTful APIs with functionalities such as login/sign up, view a product, add a product to cart, checkout the order, etc.
- Improved the response time by 20% by refactoring the codebase and changing database design and queries.
- Added a bulk upload feature which reduced the manual work of adding products into a database.

**Meditab Software Pvt. Ltd.** December 2018 – August 2019
Programmer Analyst
- Customized a tree-based optimization algorithm that separates drugs into distinct groups to maximize the concurrent execution of drug dispenser robots; improved an optimization algorithm that reduced the cycle-time of the automation process by 25%.
- Devised a customized recursion algorithm to extend the functionality of the current environment to a multi-robot and multi-system environment.
- Built a modular video analytics app using Flask, OpenCV that tracks the location of each human in a multi-camera environment; utilized perspective transformation, object detection, and object tracking to find the location of a human.
- Increased the speed of the video analytics app by 20% by using a customized YOLOv3 algorithm to perform object detection and DeepSORT algorithm for multi-object tracking.

**Mtag Innovations** July 2018 – November 2018
Software Developer
- Programmed a cloud-based web app using Flask and JavaScript aimed at storing, visualizing, and tracking temperature and humidity of each drug container to estimate the degradation of the drug.
- Created an alert system to send notifications and emails when the parameters exceed the threshold.

## Projects

**Twitter Sentiment Analyzer** March 2021 – April 2021
Tech Stack: Python, Django, GCP (GAE, Pub/Sub, BigQuery, DataFlow), HTML/CSS
- Developed an elastic web application using Google Cloud Platform APIs which provides sentiment analysis of trending songs and movies by extracting top trending tweets; utilized Google App Engine for deployment and auto-scaling.
- Implemented the load generator to test the scalability of the application by generating 500 concurrent requests and 15000 user requests using Apache Beam.

**Image Recognition as a Service** February 2021 – March 2021
Tech Stack: JavaScript, Node.js, Java, AWS (EC2, SQS, S3), HTML/CSS
- Architected an elastic image recognition web service that can autoscale up to 20 EC2 instances; created custom AMIs to get image classification result; used SQS to handle request and response.
- Built a custom load balancer which improved the performance by 80% by using queuing mechanism.
- Tested the implementation of auto-scaling and load balancing by generating 1000 requests.

**Music Streaming Web App** June 2020 – June 2020
Tech Stack: Python, Django, Bootstrap, AWS (S3), Heroku, HTML/CSS
- Coded and deployed full-stack web app incorporating features like OAuth-based login/sign up, play songs, view detail of song, view recently played songs, create multiple playlists, and search and filter songs based on singers and languages.