

# SUMANT GAOPANDE

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## EDUCATION

**Indiana University – Bloomington, IN**

*Master of Science in Computer Science*

May 2021

CGPA: 3.8/4

Relevant Coursework: Distributed systems, Applied Algorithms, Applied Machine Learning, Computer Vision

**University of Pune, India**

*Bachelor of Computer Engineering*

June 2017

First Class with distinction

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, Node.js, C++, JavaScript, HTML/ CSS

**Cloud:** REST, Kubernetes, AWS (S3, EC2), Jenkins, RabbitMQ, Docker, CI/ CD

**Tools, frameworks & libraries:** Maven, Git, OpenCV, Redis, Ansible, Angular, Express, MySQL, Couchbase

## PROFESSIONAL EXPERIENCE

**Software Engineer | Accenture Solutions Pvt. Ltd**

September 2017 – July 2019

- Developed a **REST** service in **Node.js** to handle IP flips in set-top boxes **reducing** configuration time by **95%**.
- Developed a **Full-Stack web application** using **Angular** and **Node.js** for querying test data from Couchbase **reducing** data retrieval time to **less than 2 seconds**.
- Developed an **Optical character recognition** (OCR) service to identify set-top box errors using **Python (OpenCV)**, **reducing debug time to less than a minute**.
- Built a **Chatbot** search engine in **Angular, Python & Node.js** that **saved time** spent by teams on repetitive knowledge transfer.

**Engineering Intern | Atreya Innovations Pvt. Ltd**

July 2016 – April 2017

- Developed a data pipeline to collect and process signal data in **MATLAB**.
- Implemented Neural Net and SVM **classification** models to study the impact of yoga as a stimulus on wrist pulse signals.

**Software Engineering Intern | Cytel Pvt. Ltd**

June 2016

- Developed a windows application in **C++** to **automate** the testing of computational engines.
- **Significantly reduced testing time** of computational engines and **streamlined** the process.

## PROJECTS

**Leader Election in Kubernetes Python client – Open Source contribution**

- Developed a module for multi-threaded Leader Election in a Distributed Architecture using object locks.

**RainCheck – A weather forecasting Distributed System** (Java – Spring Boot, Node.js, React, Python, Docker, Kubernetes)

- Built scalable **containerized microservice** architecture to compute precipitation graphs from Nexrad radar data.
- Implemented **Continuous integration & deployment** for the services in a **Kubernetes** cluster using **Jenkins**.
- Integrated the system with **Istio service mesh** exposing **Grafana** and **Kiali** dashboards.

**FindTheHorizon** (Python)

- Developed a Computer Vision utility that finds and paints the horizon in an image using Baye's nets and the Viterbi algorithm.

**A/B Testing web application** (JavaScript, Cloudflare worker API)

- Developed an A/B testing web application where requests are evenly distributed between 2 versions of a webpage.
- A user will randomly get either of the 2 versions and keep getting the same webpage unless cookies are destroyed.

**Business optimization with Yelp reviews** (Python)

- Identified negative topics from customer feedback for restaurants using **Topic Modelling** (Latent Dirichlet Allocation).
- Identified competitors by **clustering (Hierarchical)** restaurants based on cuisine, sentiment, check-in patterns, etc.
- Recommended popular items/dishes in a restaurant that customers like using **Named Entity Recognition**.

## ACHIEVEMENTS

- **Open Source contribution** to the official **Kubernetes** Python client (Review in progress).
- Awarded a **Client Appreciation** award for the various projects developed at **Accenture** for **British Telecom**.
- Runner up for '**The Most Radical Idea of The Year**' at **Accenture** (British Telecom - Da Vinci) for the development of an automation utility to detect errors using Optical Character Recognition.