

SUMANT GAOPANDE

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EDUCATION

Master of Science in Computer Science	Indiana University – Bloomington	CGPA: 3.8/4	May 2021
Bachelor of Computer Engineering	University of Pune, India	First Class (distinction)	June 2017

SKILLS

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

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

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

WORK 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)

- 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

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- **Open Source contribution** to the official **Kubernetes** Python client (Review in progress).
 - **Client appreciation award** for spearheading the project of building a REST service to handle IP flips in set-top boxes.
 - **Runner up** for 'The Most Radical Idea of The Year' at Accenture (**British Telecom - Da Vinci**) for the development of an OCR service to identify set-top box errors.