



EKTA GAVAS

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Education

International Institute of Information Technology, Hyderabad

July 2019 – May 2022

MS by Research, Computer Science and Engineering (CGPA: 8.83/10.00)

Hyderabad, Telangana

The Maharaja Sayajirao University of Baroda

July 2014 – April 2018

BE, Computer Science and Engineering (GPA: 3.99/4.00)

Vadodara, Gujarat

Relevant Coursework

Computer Vision, Statistical Methods in AI, Deep Learning-Theory and Practices, Digital Image Processing, Software Engineering, Data Structures & Algorithms, Object Oriented Programming, Network Security, Databases, Math & Statistics

Technical Skills

Languages & Frameworks: Python, Flask, R, Matlab, Java, JS, C/C++, ReactJS, NodeJS, FastAPI, Angular 6, SQL

Scientific computing & analysis: NumPy, SciPy, Pandas, Scikit-learn

Data Visualization: Matplotlib, Seaborn, Plotly, MLFlow, TensorBoard

Deep Learning Frameworks : PyTorch, TensorFlow, Keras, MXNet

Miscellaneous Tools & Technologies : Git, Docker, Slurm, TCP/IP, Faiss, Milvus, Microsoft Azure, Google Cloud

Experience

Graduate Research Assistant (*Advisor: Dr. Anoop N.*) *CVIT, IIT Hyderabad*

December 2019 – Present

- **Continual Learning:** Designing **semi supervised** continual learning strategy using **generative models** and **knowledge distillation** to prevent catastrophic forgetting.
- **Biometrics with Deep Learning:** Trained a deep neural network for **fingerprint enhancement** on synthetic images from Anguli and Sfinge generators and improved fingerprint **matching performance by 4.9%**. Utilized learned features for **minutia extraction**.
- **Large-scale similarity search:** Benchmarked various indices available in **Faiss library** to minimize time-accuracy trade-off targeted to achieve **9 qps** with a **large gallery of 45M samples** along with resource monitoring.

Teaching Assistant *IHub-Data, IIT Hyderabad*

June 2021 – Present

- Worked closely with the professors in preparing course material, conducting labs, doubt-solving sessions, and evaluating projects for 290+ students for the program **Foundations of Modern Machine Learning-2021**.

Associate Software Engineer *Jeavio (India) Pvt. Ltd.*

May 2018 – January 2019

- Designed, developed and tested various **front-end modules for resorts and snow sports bookings** portal in Angular 6. Also, **developed and integrated REST APIs** in NodeJS following Agile methodology.
- Developed and tested **Python APIs for network solutions** (Wifi and SDWAN).

Student Intern *The Maharaja Sayajirao University of Baroda - IIT Bombay*

May 2017 – April 2018

- Developed web-based animated and interactive **demonstrations** and self-evaluations to illustrate the basic and advanced concepts in **Data-mining** for the **Virtual Labs project**.

Projects

- **Center Loss Regularization for Continual Learning** (*paper*): Designed an efficient continual learning method using center loss which is competitive with recent regularization strategies **utilizing minimal additional memory**.
- **Deep CNNs for Peripheral Blood Cell Classification** (*paper*): Applied transfer learning and ensemble methods on CNN models for Blood Cell Classification. Achieved accuracy of **99.51%** beating the best so-far.
- **Avalanche** (*Open-Source Contribution*): Contributed a strategy and plugin of **regularization-based continual learning** method **Less-Forgetful Learning (LFL)** to the end-to-end continual learning library Avalanche.
- **Medical AI:** Predicted severity of **6 diseases** from clinical parameters with more than **85% accuracy** using neural networks. Developed micro-services based web application in ReactJS and Flask and deployed it on Google Cloud.
- **Neural Network for 3D Object Classification:** Studied and implemented a paper for 3D Object classification using Neural Networks, making it spatially invariant with **voxel representation** and **3D spatial transformer networks**.

Extra-Curricular and Leadership

- Coordinated **training and placement activities** at Placement cell for computer science department at MSU Baroda.
- Invited to **mentor** a two-day **Python Programming workshop** with 40+ participants at MSU Baroda.
- Coordinated the computer programming events by **Computer Society of India (Vadodara Chapter)** engaging students from various schools and colleges.