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, IIIT Hyderabad*   **December 2019 – Present**
- **Continual Learning:** Designing replay-based domain and task-incremental strategy to avoid catastrophic forgetting exploiting feature inversion with deep networks.
- **Biometrics with Deep Learning:** Successfully implemented fingerprint enhancement and minutia extraction using a single deep neural network with synthetic fingerprints from Anguli and Sfinge generators.
- **Large-scale similarity search:** Benchmarked various indices available in Faiss library to minimize time-accuracy trade-off at search time along with monitoring resource utilization.

Teaching Assistant *IHub-Data, IIIT Hyderabad*   **June 2021 – Present**
- Worked closely with the professors in preparing course material and conducted labs doubt-solving sessions, providing feedback and guidance to 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 Wifi and SDWAN network solutions for company's largest portfolio client.

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 state-of-the-art accuracy of 99.51%.
- **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 as guest speaker for 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.