

Pratiksha Pundalik Pai

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EDUCATION

- **Georgia Institute of Technology** Atlanta, GA
Masters in Electrical and Computer Engineering; Aug 2022 - Present
- **National Institute of Technology, Karnataka (NITK)** Surathkal, India
Bachelor of Electrical and Electronics Engineering; GPA: 4.0 (9.03/10.0) Aug 2015 - May 2019

SKILLS SUMMARY

- **Languages:** Python, C++, Java, MATLAB
- **ML Tools:** PyTorch, Keras, Tensorflow, Numpy, Scikit-learn, Pandas
- **Automation Tools:** Git, Airflow, Kubernetes, Docker, Shell, Jira
- **DevOps Tools:** Helm, Jenkins, DroneCI, Terraform, Ansible, AWS & Azure CLIs

EXPERIENCE

- **Infoworks Data** Bangalore, India
Senior Software Engineer June 2019 - July 2022
 - **HPA for MongoDB on Kubernetes:** Designed automated shifting between MongoDB standalone and three node replicaset components in Kubernetes. Ensured a highly available setup with automatic data replication and failover between the primary and secondary components with replication and failover time of **maximum of 0.47 seconds and 9 seconds**, respectively. Implemented an autoscaler to scale MongoDB replicaset components depending on CPU load .
 - **Major Version Product Upgrades:** Developed Python Taskflows to migrate large Mongo metadata of **2.6 million documents** and large resources. Added resource and upgrade support for Ubuntu and AL2 platforms. Handled **3 major version** upgrades for Infoworks product running on multiple customer environments for the project spanning **1 year**.
 - **MongoDB Atlas Support:** Developed end to end Python Taskflows to install with MongoDB Atlas DB Layer. Wrote utility functions for smooth transition to Atlas setup for Mongo Metadata of the order **200GB**. Handled upgrades from **2 lower versions** to support MongoDB Atlas.
 - **Build and Maintain Testdrive Product Version:** Developed Jenkins pipelines to build and deliver incremental updates on Testdrive Production environment. Implemented automated updates to Staging and Production Testdrive environments using Jenkins and AWS Lambda. Set up **production monitoring and weekly backup pipelines** using AWS CloudWatch and AMIs. Handled **13 weekly** updates with a team of **3** members adding a key strategic partner to the company.
 - **Automations on Cloud Deployments:** Developed jobs to provision essential cloud resources on AWS and Azure. Automated nightly shutdowns for idle resources cutting costs by **35%**. Wrote audit jobs for weekly reports on the cloud resource usage.
- **Citicorp Services India Limited** Pune, India
Software Trainee May 2018 - Jul 2018
 - **Automation Testing for UI Componenets:** Designed an automated regression testing suite for **17 UI components** using Cucumber Framework.

ACADEMIC PROJECTS

- **National Institute of Technology, Karnataka (NITK)** Surathkal, India
Course Projects April 2018 - May 2019
 - **Unpaired image-to-image translation using CycleGAN:** Designed a Cycle Generative Adversarial Network(CycleGAN) to transform horse images to zebra using Python Keras on UC Berkeley CycleGAN Dataset. Designed a generator setup with encoder, a ResNet transformer, and a transpose Convolutional Neural Network (CNN) decoder block; discriminator setup with a traditional CNN block. Trained the model to minimize cycle consistency loss to convert all horse images in the testing set to zebra (April '19)
 - **Controlling a prosthetic arm using EEG signals:** Designed a Brain-Computer interface to control 3D printed prosthetic limb with EEG signals. Extracted filtered EEG signals from Xavier Composer and trained an Artificial Neural Network (ANN) using Python Tensorflow. Demonstrated a simple clench/unclench operation on the Prosthetic arm with an accuracy of **78%** (April '18)
 - **Classification of EEG signals for detection of Epilepsy:** Designed a binary classifier to separate epileptic EEG signals from the rest. Applied wavelet transform, Fast Fourier transform (FFT) for extracting features from Bonn Database using MATLAB. Implemented an ANN using Python Tensorflow and obtained an accuracy of **85%**. (April '18)

HONORS AND AWARDS

- Amongst the top **10%** in BTech EE at NITK and Core Placement Coordinator for Batch'19.
- Executive Member of ACM, NITK