

Prabhasa Kalkur

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[GitHub](#) | [LinkedIn](#) | [Webpage](#)

SUMMARY

Recent Graduate on F1-OPT seeking full-time opportunities as a Software Developer, Data Analyst starting Oct 2021.

EDUCATION

Master of Science in Electrical Engineering, Texas A&M University (TAMU), USA. **GPA:** 3.9/4 **Dec 2020**
B.E. in Electronics and Communication, R.V. College of Engineering (RVCE), India. **GPA:** 9/10 **May 2016**

SKILLS

Languages & Tools: Python | SQL | Tableau | Git | NumPy | pandas | Matplotlib | C | C++ | REST APIs | SAP IBP
ML Frameworks & Libraries: PyTorch | scikit-learn | Keras | TensorFlow | Stable Baselines 2.0 | Tensorforce

EXPERIENCE

Intern, CoE Supply Chain Planning & Innovation, Logistics Planning & Procurement **Mar 2021 - Present**
SAP America, Inc., Newtown Square, PA, USA

- Implement a Pattern Optimizer for a client using GurobiPy APIs to detect production line patterns (SAP BTP).
- Use Linear Programming to dynamically recommend profit-maximizing production plans (SAP IBP for Response).
- Develop a machine learning model for production plan generation using Deep Reinforcement Learning (TensorFlow).

Graduate Researcher, Department of ECE, Texas A&M University [[GitHub](#)] **Oct 2019 - Oct 2020**
Thesis: "Learning from Demonstrations: Applications to Autonomous UAV Landing & Minecraft"

- Taught AI models to simulate real-world tasks using machine learning techniques on human demo data.
- Designed a novel method of autonomous UAV landing that imitates a pilot's maneuvers at sea (Python).
- Attained high imitation accuracy with only 10 demos of drone navigation in [AirSim](#), a physics-based environment.

Project Assistant, Code Design and Analysis Lab, Indian Institute of Science **Nov 2017 - Jul 2018**

- Optimized pickup & delivery of goods for Nokia's warehouses using GurobiPy APIs.
- Implemented classical metaheuristics to find the shortest path and reduced overall delivery time by 30% (Python).

Project Assistant, Signal Processing and Comms Lab, Indian Institute of Science **Jul 2016 - Oct 2017**

- Studied indoor localization of a device using k-NN on power measurements of embedded nodes.
- Performed Monte Carlo studies to show an exponential reduction in uncertainty on increasing nodes.
- Tracked a phone with 96% accuracy and low localization uncertainty in a large area with few nodes (MATLAB).

PROJECTS

Tracking COVID-19 Development in USA [[Tableau](#)]

- Visualized trend, concentration of COVID-19 cases, deaths in US states using Tableau's COVID-19 Data Hub.
- Showed rising trend, even with vaccines deployed, in states with highest number of cases: California and Texas.

MineRL Competition, NeurIPS 2020: Learning to Imitate Tasks in Minecraft [[GitHub](#)]

- Used Neural Networks to learn tasks in Minecraft by processing images from gameplay data (Python, PyTorch).
- Wrote an efficient data pipeline to process 60 million data points from [MineRL](#), boosting performance by 80%.
- Applied imitation learning for teaching agents to perform tasks in Microsoft [Malmo](#), outperforming RL methods.

Classification Algorithms for Supervised Learning on Popular Datasets, TAMU [[GitHub](#)]

- Implemented a Naive Bayes classifier with 86% accuracy on the noisy Iris dataset (Python, Keras, scikit-learn).
- Performed classification of the noisy MNIST dataset to compare performance of SVMs with Neural Networks.
- Utilized data augmentation to improve performance, with accuracies of up to 89% for SVMs and 87% for NNs.

COURSEWORK

Data Structures & Algorithms, Optimization Theory, Machine Learning, Reinforcement Learning, Linear Algebra.

LEADERSHIP

- Indian Graduate Student Association (IGSA): VP of Editorial & Mentoring, TAMU, Oct 2018 - May 2020.
- ECE Graduate Student Association (ECE-GSA): External Officer, TAMU, Oct 2018 - Oct 2019. Article [here](#).