# Prabhasa Kalkur

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Business Process Consultant at SAP America, Inc. since Jun 2021. Previously SAP CoE Intern Mar-Jun 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 | Javascript | C | GitHub | REST APIs | Tableau | NumPy | pandas | Matplotlib
**SAP Tools**: Integrated Business Planning (IBP) | Business Technology Platform (BTP) | Intelligent Robotic Process Automation (IRPA) | HANA Predictive Analytics Library (HANA PAL) | HANA | UI5 | Fiori
**ML Frameworks & Libraries**: PyTorch | scikit-learn | Keras | TensorFlow | Stable Baselines 2.0 | Tensorforce

## EXPERIENCE

**Business Process Consultant, Center of Expertise**, Logistics Planning & Procurement     **Jun 2021 - Present**
SAP America, Inc., Newtown Square, PA, USA
- Enhanced Supply Chain Forecasting in SAP IBP by leveraging machine learning techniques on customer data.
- Developed an SAP BTP App and SAP IRPA Bot to perform automated forecast model parameter optimization.

**Intern, SAP America, Inc.,** Newtown Square, PA, USA     **Mar 2021 - Jun 2021**
- Implemented an ML-based Pattern Optimizer to recommend revenue-optimized production plans for Tyson Foods.
- Developed a machine learning model for production-line plan generation using 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 imitation learning on human demo data.
- Designed a novel method of autonomous UAV landing that captures 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-Nearest Neighbor algorithm on power measurements of embedded 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.