

SHREEDHAR KODATE

Objective

Looking for Artificial Intelligence / Machine Learning / Data Science Internship during Summer 2022.

Education

Worcester Polytechnic Institute

Ph.D. in Computer Science (AI/ML for Education), Advisor: Dr Jacob Whitehill

Aug. 2021 – Present

Worcester, MA, USA

Indian Institute of Science

M.Tech. in Computer Science and Automation, Advisor: Dr Shalabh Bhatnagar

Aug. 2016 – Dec. 2018

Bengaluru, KA, India

Accepted Papers

Intelligent Coordination among Multiple Traffic Intersections Using Multi-Agent Reinforcement Learning (NIPS 2019)

Dec. 2019

Advisor: Dr Shalabh Bhatnagar, Paper: <https://arxiv.org/abs/1912.03851>

Vancouver, BC, Canada

Relevant Coursework

Machine Learning, Natural Language Processing | *Reinforcement Learning, Game Theory*

Experience

Quantiphi Inc.

Feb. 2021 – Jul. 2021

Senior Machine Learning Engineer | Python, TensorFlow Extended, Google Cloud Platform

Bengaluru, KA, India

- Created a pipeline of OpenCV data augmentation, model-assisted data cleaning and labelling to qualify dataset to train Efficientnet models which improved classification accuracy by **20%** of frequently varying image designs into **500** classes.

Yantriks India Pvt. Ltd.

Jan. 2019 – Aug. 2020

Machine Learning Engineer | Python, SQL, Google BigQuery, DataStudio, matplotlib

Bengaluru, KA, India

- Designed and implemented end-to-end ML systems for Global Returns Forecasting, Dynamic Capacity Planning, etc.
- Increased inference performance by **70%** and decrease running cost by **20%** for deployment code by bootstrapping.
- Implemented parameterized code to enable **Neural Architecture Search (NAS)** driven by JSON config.
- Mentored an intern** for 4 months while implementing EDA and ML data flow pipelines for Anomaly Detection.

Projects

Brain Tumor Radiogenomic Classification using 3D-CNN | *Python, TensorFlow, GPU*

Oct. 2021 – Dec. 2021

- Worked on a very important and challenging dataset of brain MRI scans downloaded from a Kaggle competition. We tried a **one-shot atlas** based data augmentation and **ensemble** methods to improve DNA methylation classification.
- Trained 3D CNN and Resnet50 models on 4 different types of brain MRI scan data. Created an ensemble of these models to increase the methylation classification performance by **4%**.

Scoring Lecture Transcripts using GNN | *Python, TF, Transformers, Graph, GNN*

Oct. 2021 – Dec. 2021

- Another important problem is to rate lectures to improve the overall learning experience. We used a free Automatic speech recognition API to get the noisy transcripts and experimented to create an unbiased lecture scorer.
- Built an entire pipeline from data acquisition to modelling using various ML techniques. Applied Graph Convolutional Networks to the data in addition to BERT pre-trained models and observed **5%** improvement after data augmentation.

Technical Skills

Languages: Python, SQL, Java, C++, HTML/CSS, JavaScript

Developer Tools: PyCharm, VS Code, Eclipse, Google Cloud Platform

Technologies/Frameworks: Linux, Jenkins, GitHub, WordPress

Extracurricular

- * Forming a youth empowerment club at WPI based on Bhagavad-gita principles and Srila Prabhupada's teachings.
- * Officially taught and examined Data Science Honors course to **70** undergrad students at DYPCOE, SPPU.
- * Gave a talk on Essence of Linear Algebra in IISc Summer School 2017 to **80** students from across India.
- * Organized a team of **10** presenters for interactive demos explaining Computer Science concepts like Stable Matching Problem, Neural Net, Rocket Landing using Reinforcement Learning.