SHREESHA N MURTHY

Worcester, MA | +17747019413 | snarasimhamurthy@wpi.edu

www.linkedin.com/in/shreesha-n | shreeshan.github.io

PROFESSIONAL SUMMARY

- Worked as an AI Engineer. Built Deep Neural Networks for use cases in Computer Vision, NLP and finance domains
- Built explainable AI framework for Deep Learning models.
- Worked in Research, Engineering and Product development teams in the Industry.

EDUCATION

Master of Science in Data Science, August 2019 (GPA:4.0)

Worcester Polytechnic Institute (WPI), Worcester, MA

Bachelor of Engineering in Computer Science, First class, May 2011 – May 2015

East West Institute of Technology, Bangalore, India

RELEVANT COURSEWORK

Deep Learning, Reinforcement Learning, Statistics, Big Data Analytics, Data Structures and Algorithms

WORK EXPERIENCE

Artificial Intelligence Engineer – **Razorthink**, India **|** Mar 2016 – Jul 2019

- Cut operation costs of a banking client by **80%** by developing a deep learning model for churn prediction, backed by explanations from the model, which was previously done by humans
- Saved **$25k** annually by building a conversational tool to query relational database in plain English
- Built state-of-the-art OCR using CRNN(conv nets and LSTM) which saved more than **$10k** annually for the company from buying a paid OCR from the market
- Built customer churn, upsell, cross sell, customer retention, credit worthiness models in Deep Learning

SKILLS

- **Neural Networks:** FFN, CNN, Recurrent (LSTM) Networks, Variational Auto Encoders, GANs
- **Reinforcement Learning algorithms:** Deep-Q-learning, Policy gradient methods, Actor-Critic (A2C, A3C)
- **Frameworks and Libraries:** TensorFlow, Pytorch, Flask, Spring Boot, Spring Data, Hibernate, JQuery
- **Big data Platforms:** Hadoop, Spark, Tensorflow PS architecture, Horovod(distributed deep learning)

RESEARCH PROJECTS

- **Explainable AI (Deep learning)**
  Built a framework to explain the prediction done by DL model. Used the trained model weights and activations and combined them with raw customer data to come up with explanations for the prediction.
- **Conversional AI (Deep learning)**
  Built a tool for users of an organization to query their relational database in English which was translated into SQL query and executed. Trained word2vec models as per domain specific needs
- **Curiosity based exploration (Reinforcement learning)**
  Identified a crucial issue while training a Deep-Q-network on Atari Breakout where agent reaches a local minima and loses motivation to train further due to environment's reward system turning sparse. Leveraged the curiosity concept to improve training by introducing an intrinsic reward system.

PROFESSIONAL PROJECTS

- **End to End Trainable OCR –** Connectionist Temporal Classification
  Developed an end to end trainable OCR. Trained a Convolutional LSTM on a multi GPU distributed pipeline(Data parallelism). Dataset contained 50 types of font - 10 million word images. Prediction across 104 unique characters. **Accuracy-81%**.