Piyush Malhotra

https://www.linkedin.com/in/piyush2896/ • https://github.com/piyush2896/ • piyush.m@asu.edu • +1-480-265-5033

SUMMARY

A Software Engineering student experienced with Iterative Development processes with application and research based knowledge of skillsets pertaining to Data Mining, Machine Learning and Deep Learning. Looking for summer 2020 internship.

EDUCATION

- **Arizona State University**   *August 2019 – May 2021*
  MS in Computer Software Engineering
- **Amity University**   *July 2014 – May 2018*
  B.Tech in Computer Science and Engineering

PROGRAMMING SKILLS

- **Languages:** Python, C/C++, Java, SQL, JavaScript, HTML/CSS
- **Tools and Technologies:** AWS, Google Cloud, Android Studio, Git/GitHub

EXPERIENCE

- **Untrodden Labs**, New Delhi, India, *Machine Learning Intern*   *June 2018 – October 2018*
  Responsible for iteratively training, testing and deploying deep learning models that can automate the process of reducing electricity consumption.
  - Train and Tested Non-Intrusive Load Monitoring (NILM) Deep Learning models in Python using TensorFlow.
  - Deployed the model using TensorFlow-serving on AWS.
  - Migrated the deployed model from AWS to Google Cloud as the company decided to migrate.
  - Current NILM system scores an – **F1 score for different appliances varied between 0.1 and 0.9 over test set.**
  - Developed prototype for Deep Reinforcement Learning applied to Heating, ventilation, and air conditioning (HVAC) systems for consumption reduction.
  - The Deep RL model gave **12% improvement in simulated environment.**
- **StarLight Academy**, New Delhi, India, *Full Stack Development Intern*   *May 2017 – July 2017*
  - Full stack development of website for the internal usage – billing, database management, message broadcasting.
  - Developed databased using MySQL to maintain tables of students and teachers enrolled.
  - Billing services to maintain billing data and receipt generation
  - Message broadcasting using RESTful APIs.

PROJECTS

- **MatHub**: In a team of four, developed a Flask based application for students from grade 1 to 12 to perform basic to complex mathematical operations, which is also programmed for automated grading and assignment broadcasting to students from teacher. (Skills – Python, HTML, CSS, Javascript, Flask, Version Control)
- **Particle Swarm Optimization for Neural Networks**: An experiment to replace Backpropagation, primary mode of training neural networks, with Particle Swarm Optimization. (Skills – Python, NumPy, OOP Version Control)
- **Drowsiness Detection and Alerting System (DDAS)**: In a team of three, developed a DDAS for automobile using Deep Learning models for Facial Landmark Detections. (skills – Python, TensorFlow, Flask, HTML, CSS, Javascript, Version Control)

RESEARCH & PUBLICATIONS

- **Publication:** Presented a paper **Parameter Estimation of Software Reliability Growth Models Using Krill Herd Algorithm** in Confluence 2017 - annual IEEE international conference held in Amity University, Uttar Pradesh, India.
- **Poster**: As part of final year thesis conducted a project based approach towards Meta-heuristics in Deep Learning and devised a **Neural Architecture Search using Meta-heuristics. Selected in top 10 posters at Department Level.**