ABHISHEK KUMAR REDDY GOTIKE

774-253-1949 • agotike@wpi.edu • Worcester, MA

Objective

Full time software engineer roles starting from Summer 2023.

Education

Worcester Polytechnic Institute (WPI), Worcester, MA **Expected: May 2023**

- Master of Science (MS), Computer Science, CGPA: 3.83/4.0

Relevant Coursework: Data Structures and Algorithms, OOP, Design of Software Systems, Algorithms: Design and Analysis, Computer Networks, Deep Learning, Natural Language Processing

Manipal Institute of Technology, Manipal, India **July 2017**

- Bachelor of Technology, Electronics and Communication Engineering, CGPA: 8.58/10

Technical Skills

Programming: Java, Python, SQL**,** HTML, CSS
Software & Tools: AWS-Lambda, S3, RDS, Git, MATLAB, Atlassian Suite
Frameworks & libraries: Spring Boot, Spring framework, Pandas, Numpy, Scikit-learn, Pytorch, Seq2Seq, RNNs, CNNs, VAE

Work Experience

Research Assistant – Data Engineering / Machine Learning, WPI **Jan 2022 – Present**

- Identified variables and designed database schemas to store the Biomedical researcher's data to identify K to R success patterns.
- Developed a parser in python to extract raw data from PubMed and PMC databases to build datasets.
- Extracted features from the raw data to train a machine learning model.
- Currently proposing a ML model to predict K to R funding award success for Principal Investigators.
- The work will be extended to incorporate explainable AI algorithms to study the success patterns.

Teaching Assistant, WPI **August 2022 - Present**

- Courses: Machine Learning and Programming for Non-Majors
- Handling undergraduate lab sessions, grading exams, and assisting students by conducting office hours.

Mercedes-Benz Research and Development, India & Germany **July 2017 – May 2021**

Software Engineer – autonomous driving simulation

- Collaborated with various stakeholders to develop a framework in Python based on object-oriented principles to simulate the behavior of static and dynamic models to ensure a realistic interaction with the software.
- Designed simulations for collision avoidance systems that adapted well with changing carlines.
- Developed automation for simulated data analysis using Python which reduced the software evaluation time from a couple of weeks to one day.
- Studied the validation tool chain specifications and implemented a POC using Python to automate Hardware in Loop tool chain.

Indian Institute of Technology, Hyderabad **January 2017 – June 2017**

Research Internship

- Conducted a study of blind source separation algorithms – Independent Component Analysis (ICA), Single Channel ICA (SCICA).
- Performed data analysis of SCICA algorithm by varying the sampling frequency and delay matrix dimension to understand the impact on the similarity of reconstructed output using MATLAB.
- Researched existing literature and proposed a hardware efficient system architecture to compute covariance of 128*256 data using 8 multipliers.

Related Projects

Algorithm Management System – four-member group project **October 2021**

- Collaborated to develop a web-based application where individuals can share their research with their peers along with several other parameters in a hierarchical organization hosted on AWS.
- Developed the backend of the application in Java based on model view controller design paradigm.
- Programmed unit tests and achieved a code coverage of 78%.
- AWS services used – Lambda, S3, RDS, API Gateway.

Triangle Puzzle – Individual project **August 2021**

- Developed a standalone triangle puzzle game application in Java based on Model view controller design paradigm.
- Developed unit tests and achieved a code coverage of 96.3%.

Title generation for news articles – four-member group project **December 2021**

- Performed data analysis to identify features such as news articles and keywords to generate an abstractive summarization of the news article.
- Trained and validated the baseline LSTM and LSTM with pointer generator network models using python.
- BART and T5 outperformed the LSTM models in generating semantically valid headlines.
- Performed model evaluation using Rouge, BertScore & BLEURT.

Awards and Leadership Roles

Mercedes-Benz Research and Development

- Xtreme Award – Recognized at the organization level for my willingness to support other business units within Daimler during the COVID-19 pandemic. **April 2021**
- Successfully lead a team of 10 members during a tough release phase guiding team members with technical challenges and coordinating with the project stakeholders during absence of the project manager. **August 2019**
- Awarded Bronze Star for displaying one of organization's core principles – Agility. **July 2019**