SHREYAS KULKARNI

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EDUCATION

Rutgers University **Sep 2021 - May 2023**
Master of Science in Computer Science | **GPA: 3.78/4.0** New Brunswick, NJ
- TA for Intro to Stat course: Conducted and managed 10+ recitations and graded assignments for 120+ students
- Coursework: Machine Learning, Data Structures & Algorithms, Massive Data Mining, Computational Robotics

University of Pune **Jun 2016 - May 2020**
Bachelor of Engineering in Computer Engineering | **CGPA: 8.99/10** Pune, India
- Coursework: Software Engineering & Project Management, Database Management System, Advanced Data Structures

EXPERIENCE

ADP **Jun 2022 – Aug 2022**
Application Developer Intern - SRE DevOps Team Parsipanny, NJ
- Developed and deployed a centralized workflow management system for ADP employees, streamlining the onboarding process for new microservices, automating repository creation and deletion, and linking microservices
- Improved the system by redesigning the front end using ReactJS, TypeScript and incorporating a Redux-powered backend using Python, resulting in a reduction of 500 lines of code and the creation of a new ADP standard website
- Deployed the system with Docker, resulting in a 70% increase in user engagement and making the web app the preferred destination for ADP developers to monitor live deployment status

AriaAI IntelliGen **Sep 2020 – Apr 2021**
SDE Intern Pune, India
- Designed and implemented a versatile chatbot service as a standalone web application or as an integration into existing websites
- Led a team of 4 in creating an admin panel with real-time analytics to monitor customer engagement and improve customer experience
- Demonstrated demographic user insights through data visualization and attracted interest from 5 potential investors

Pratibha Systems **Aug 2018 – Dec 2018**
Software Developer Intern - IoT Pune, India
- Completed a project for DRDO (Defense Research Development Organization) related to national security
- Collaborated with a team of 5 to design and develop a fully functional Raspberry PI module equipped with a user-friendly GUI and seamless integration into the system
- Optimized and automated machine launch processes by upgrading the existing method, resulting in a 50% improvement in efficiency and performance

PROJECTS

Abstract Visual Reasoning Task - Code
- Developed and enhanced the MRNET-based Network, a novel solution for Abstract Visual Reasoning tasks, specifically RAVEN's Progressive Matrices (RPM)
- Trained a neural network on over 10,000 RPM problems from the I-RAVEN dataset, outperforming baseline models like LSTM, CNN, and Resnet
- Contributed to advancing the field of Abstract Visual Reasoning through the innovative MRNET-based Network approach

Traffic Sign Detection - Code
- Designed and implemented a Traffic Sign Detection system utilizing Spiking Neural Networks, achieving 11% improved accuracy compared to traditional neural networks
- Collaborated with a team of 3 to train the neural network on over 5,000 images from the German Traffic Sign Dataset

Threat Prediction Using Speech Analysis - Paper
- Spearheaded a team of 3 in designing and building a system for predicting potential threats through audio and textual data analysis
- Incorporated an audio surveillance system for crime investigation resulted in minimizing time and human errors

Movie Recommendation System - Code
- Led a team of 2 in the development of a movie recommendation system that considers both user and movie personalization, as well as genre, popularity, and other movie characteristics
- Evaluated various models including Collaborative Filtering, Latent-Based SVD, and a Combined Linear Model to improve the recommendation system's accuracy and relevance

SKILLS

- **Programming Languages:** Python, TypeScript, JavaScript, SQL, C++, HTML, CSS
- **Developer Tools**: AWS, Docker, Git, PySpark, Databricks, VS Code, Jupyter Notebook
- **Frameworks**: ReactJS, Redux, Django, TensorFlow, PyTorch, Keras, NLTK, scikit-learn, Matplotlib, pandas, CUDA