

# SHREYAS KULKARNI

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## EDUCATION

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### Rutgers University

New Brunswick, NJ

#### Master of Science in Computer Science | GPA: 3.8/4.0

Sep 2021 - May 2023

- TA for Intro to Stat course: Conducted and managed 10+ recitations and graded assignments for 120+ students
- Coursework: Machine Learning, Data Structures and algorithms, Massive Data Mining, Computational Robotics

### University of Pune

Pune, India

#### Bachelor of Engineering in Computer Engineering | CGPA: 8.99/10

Jun 2016 - May 2020

- Coursework: Software Engineering & Project Management, Database Management System, Advanced Data Structures

## PROFESSIONAL EXPERIENCE

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**ADP** Parsipanny, NJ

#### Application Developer(Promoted from Associate Application Developer)

Jun 2023 – Present

- Designed and developed **GenAI Automation Tool** from the ground up, creating a comprehensive solution with React Redux/TypeScript frontend and Java Spring Boot backend, successfully replacing legacy automation systems across ADP modules
- Conducted extensive research on GenAI models, including GPT-4 and Meta Llama 2, implementing fine-tuning strategies and developing an integrated chatbot for automated test script generation based on natural language prompts
- Led POC to production deployment of GenAI Automation Tool using Docker containerization, achieving 50% efficiency improvement in automation workflows and streamlining enterprise-wide development processes
- Collaborated within the Agile team "Sagittarius" to develop and implement the **Sync SIA** feature, enhancing client capabilities to search for associates and synchronize data seamlessly
- Developed critical tax withholding functionality for **WorkforceNow HR product**, building comprehensive UI and backend systems supporting tax form submissions across 12 states with robust validation, preview, and submission capabilities
- Built and maintained payroll processing interfaces for **WorkforceNow Payroll product**, creating employee payroll execution UI and resolving high-priority production defects to ensure system reliability
- Delivered user-centric frontend experiences using React, Redux, and TypeScript with ADP's standard OneUX framework, ensuring consistent UX aligned with enterprise best practices

#### Application Developer Intern - SRE DevOps Team

Jun 2022 – Aug 2022

- 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

## TECHNICAL PROJECTS

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### The Culinary Theory - [Code](#)

- Built a recipe blogging website for food enthusiasts that allows them to post and browse recipes, interact with other users, and subscribe to a premium subscription service for additional features
- Constructed and maintained responsive front-end interfaces using ReactJS and JavaScript, while utilizing AWS services such as EC2 for remote server creation and running the application, and S3 for data storage

### 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), and trained 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

## TECHNICAL SKILLS

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- **Programming Languages:** Java, Python, TypeScript, JavaScript, SQL, C++, HTML5, CSS
- **Frameworks & Libraries:** Spring Boot, React.js, Redux, Node.js, TensorFlow, PyTorch, Keras, scikit-learn, pandas, Matplotlib
- **Development Tools:** IntelliJ IDEA, Visual Studio Code, GitHub Copilot, Amazon Q, Jupyter Notebook, PySpark, Databricks
- **AI/ML & GenAI:** GPT-4, Meta Llama 2, LLM Fine-tuning, Natural Language Processing (NLTK), Computer Vision, Model Training & Deployment