APOORV SHARMA

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EDUCATION

University of Rochester — **Rochester, NY, USA**
Master of Science, Computer Science (GPA: 3.30/4.00) — *Aug 2022 - Dec 2023*
- Projects: frog classification with SVM and MLP, Image segmentation with U-Net and CLAHE-Morph, pose estimation using deep learning

Thapar Institute of Engineering and Technology — **Patiala, PB, India**
*Bachelor of Engineering, Computer Engineering (*GPA: 3.29/4.00) — *Jul 2016 - Jul 2020*
- Projects: Sudoku creator and solver, Marker-based augmentation, Virtual reality maze game, Animated Lamp using Blender

SKILLS

Technical — Java, Python, Auto It, SQL, Docker, Kubernetes, Spring-Boot, Apache Kafka, REST, OAuth, SAML, SOAP, Maven, Postman, Swagger, Jenkins, Cucumber, JUnit, TestNG, AWS, Splunk, TensorFlow, Unity, Design Patterns, OOPs, Web services, Linux, GIT, CI/CD, JIRA, Scrum, JSON, XML, Data Structures and algorithms, Image Processing, Deep Learning, Augmented and Virtual Reality.

Soft skills — Problem solving, Creativity, Communication, Time management, Teamwork.

WORK EXPERIENCE

D&G Analytics Inc. — **Rochester, NY, USA**
Engineer Intern (Part-Time) — *Sep 2023 - Dec 2023*
- Optimized the Python module to extract packages with specific magic headers.
- Designed an end-to-end workflow to initiate a Windows virtual machine for running the Python module and extraction process and increased performance by 83%

D&G Analytics Inc. — **Rochester, NY, USA**
Engineer Intern (Full-Time) — *May 2023 - Aug 2023*
- Established an automated pipeline for Windows-specific exe files, enhancing extraction speed and efficiency.
- Crafted an advanced Auto-It script tailored to interface seamlessly with Windows GUI controls, heightening both accuracy and performance.
- Innovated a Python module that integrates with 'Universal Extractor 2', orchestrating the workflow and as a fail-safe mechanism, invoking the specialized Auto-It script in the event of challenges.
- Demonstrated skills by developing .exe file extraction efficiency through the implementation of Auto-It, resulting in a 52% reduction in extraction time.

Amdocs Development Center India LLP — **Gurgaon, HR, India**
Software Developer (Full-Time) — *Aug 2020 - Jul 2022*
- Enhanced OSS solutions by leveraging cloud-native technology stack to develop micro-services for Telstra account.
- Engineered a robust message handler application using Spring Boot, seamlessly connecting incoming downstream Apache Kafka traffic with upstream REST APIs - bidirectionally, enhancing dataflow and communication.
- Improved API security by integrating with Amdocs's core security layer, preemptively redirecting unauthorized users prior to interaction with spring controllers using the Kubernetes cluster layer.
- Led the development of an extensive automation framework, harnessing Cucumber and TestNG. Collaboratively integrated it with a Spring Boot application that simulated Kafka transactions, and slashing average testing duration by 70%.
- Implemented a Java module to dispatch emails for jeopardy orders, integrated it with the order orchestration pipeline.
- Oversaw and managed inaugural production tasks and support operations, adeptly maneuvering between production and pre-production environments.

Delhi Technological University — **Delhi, DL, India**
Research Intern (Full-Time) — *Jan 2020 - Jun 2020*
- Investigated advanced techniques in low-light image enhancement realm, spanning both conventional and data-driven approaches.
- Implemented six state-of-the-art enhancement techniques utilizing Python and TensorFlow and performed an in-depth comparative analysis, assessing the performance of each method through qualitative and quantitative metrics to determine the superior algorithm.

PROJECTS

Language model comparison for customer reviews — *Mar 2023 - May 2023*
- Compared the performance of three transformer models - 'Distil-Bert', 'Bert-Base' and 'Roberta-Base'.
- Aim to determine the authenticity of customer reviews by discerning originals from their paraphrased counterparts.

Sequential Modelling — *Oct 2022 - Dec 2022*
- Engineered a system implementing two Hidden Markov Models (HMMs) with configurable hidden states.
- Trained the models using the Expectation-Maximization algorithm and Sum-Product algorithm, aimed for improved natural language classification, solely utilizing the NumPy library.

Alzheimer's Assistant — *Jan 2019 - Dec 2019*
- Innovated a wearable device designed to aid elderly dementia patients to do daily activities and enabled the caregivers to monitor the patients' locations without the need for continuous surveillance.
- Refined the device with critical features such as fall detection and emergency alerts on the caretaker's mobile application.