

SUYASH RAJ

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EDUCATION

University of Wisconsin, Madison

September 2023 - Present

Currently pursuing MS in Computer Science with GPA 4.0/4.0

Birla Institute of Technology and Science, Pilani, India

August 2017 - August, 2021

Secured a Bachelor of Engineering in Computer Science with GPA 8.97 /10

TECHNICAL SKILLS

- **Languages** – Python, Go, Java, JavaScript, C#, HTML, CSS, C++
- **Databases** – PostgreSQL, MySQL, MongoDB, SQLite, Redis, Apache Cassandra, MS-SQL,
- **Frameworks & Libraries** – Goji, Gin, Spring Boot, .Net, Pandas, NumPy, PyTorch, Matplotlib, TensorFlow, Keras, scikit-learn, NodeJS, ReactJS, Microservices
- **Tools** – Git, Linux, Jira, Docker, Kubernetes, GitHub, Spark, Hadoop, RabbitMQ, Kafka, Hadoop, BigQuery
- **Cloud** – Amazon Web Services (AWS), Google Cloud, Microsoft Azure

PROFESSIONAL EXPERIENCE

Eltropy

January 2021 – August 2023

Full Stack Engineer – US Platform Team

- Developed EllieMae software integration with Eltropy, leveraging WinForms for platform launch, real-time messages synchronization, and HTTP Webhook for live alerts, saving \$220k/year in compensatory charges.
- Implemented DocuSign SDK's template matching within Java microservice, enabling the automatic population of fields upon document upload, boosting document processing speed by 200%.
- Designed and executed integrations with FinTech systems MeridianLink LoansPQ, Symitar Quest, Nice InContact and Fiserv DNA & Portico, employing RESTful APIs, SFTP, and AWS S3.
- Led a dynamic team of consultants and interns overseeing the development and deployment of high-quality platform integrations.

Microsoft

May 2020 – July 2020

Software Engineering Intern – Search Technology Centre (Bing Team)

- Engineered a solution for Bing search engine's multi-entity answer experience, with a 42% increase in user-engagement in testing.
- Enhanced and scaled query response through efficient extraction, filtering, and processing of important facts in C# and relationships between *Satori – knowledge graph* data entities to answer multi-entity queries.
- Designed and developed an end-to-end user-experience with Bing's answer architecture and Lite framework in C#.

Homi Bhabha Centre for Science Education

June 2019 – August 2019

Software Engineering Intern

- Developed GDF, an open-source knowledge representation alternative to Resource Description Framework, an extensible framework to represent knowledge/data in a graph format.
- Designed a responsive Web Application to interact with GDF data and perform queries through a GUI.

ACADEMIC PROJECTS

Plate Tectonics based Nearest Neighbourhood Search Optimization

- Utilizing theories from Plate Tectonics, developed a numerical optimization algorithm, subsequently subjecting it to rigorous benchmarking and implemented in Python.
- Improved the algorithm by pre-calculating better locale with Bio-Geography Based Numerical Optimization.
- Benchmarked the improved algorithm against CEC-2017 demonstrating the superior benchmark capabilities.

Textual Exclusion – Improving Diffusion Model generations under Vague Natural Text Prompts

- Improved the text-to-image generation performance of Stable Diffusion by fine-tuning with textual inversion to learn the individual styles from the training dataset.
- Achieved significantly lower KID score on MS-COCO, SDXL and Van Gogh datasets.

Android App – Rich Text Editor

- Created Android application to write rich-text document with formatting features, along with Text Scanning and PDF Conversion and Printing features, with more than 20K users on Android Play Store in 4 months

RELEVANT COURSEWORK

Big Data, Probability and Information Theory in Machine Learning, Deep Learning based Image Synthesis, Discrete Mathematics, Data Structures, Analysis of Algorithms, Modern Cryptography, Advanced Information Security, Database Systems, Object Oriented Programming, Neural networks, Data Mining