VANSHIKA BAJAJ

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EDUCATION

Cornell University, New York, NY   (Expected) May 2026
Master of Science in Information Science with concentration in Connective Media | GPA: 3.75
Relevant Coursework: Machine Learning Engineering, Computer Vision, Data Science, Human-Computer Interaction, User Experience and Research, Algorithms and Data Structures, Cognitive and Behavioral Science of Computing

Ramdeobaba University, India   May 2023
Bachelor of Engineering in Information Technology | GPA: 3.95

TECHNICAL SKILLS

Language:	Python, C++/ C, SQL, JavaScript, Java, HTML/CSS
Libraries:	NumPy, Matplotlib, SciPy, Pandas, Tensorflow, OpenCV
Tools & Technologies:	Informatica PowerCenter, Power BI, AWS, GitHub, Google Colab, NoSQL, Linux, Figma

EXPERIENCE

Loyal Corporate Consultants, Freelancer, India   Jan 2024 - Aug 2024
(User Research, Data Analysis, Figma, Looker Studio, Advanced Excel, Communication skills)
- Conducted user research to understand the needs and behaviors of target audiences, informing the design and development of a corporate website to enhance user experience and improve online functionality.
- Analyzed data using Looker Studio and advanced Excel techniques, providing actionable insights to optimize business processes for a rice processing unit client.

Principal Global Services, Engineer, India   Jan 2023 - Nov 2023
(AWS, Python scripting, ETL tools, Data Visualization, Security)
- Secured AWS resources by addressing vulnerabilities like misconfigurations and insecure APIs. Implemented encryption, access control, and best practices, reducing security incidents and enhancing compliance.
- Designed and implemented AWS resource solutions by writing Python scripts to automate the creation and management of resources based on business requirements.
- Utilized ETL tools such as Informatica PowerCenter and Power BI for seamless data processing and visualization, enhancing data comprehension across the organization.

PROJECTS

MiniTorch, Cornell Tech: Part of Machine Learning Engineering Course   Aug 2024 - Dec 2024
(Python, Git, VScode)
• Implemented a deep learning framework from scratch that re-implements PyTorch utilizing auto-differentiation, tensors, backpropagation algorithms, and parallel programming using CUDA.

Automatic Domain Classification, Language Technology Research Centre, India   Aug 2022 - Dec 2022
(Document Extraction, Text Classification, NLTK, Python) IEEE
• Collaborated with a team to design and develop an NLP-based text classification system, achieving 88% accuracy in categorizing documents across domains like Computer Science, Chemistry, and Mathematics.
• Defined project goals, coordinated model development using TF-IDF and machine learning techniques, and ensured alignment with user needs and organizational objectives.

Clause Simulator for English Lab, Ministry of Information Technology, India   Jan 2022 - June 2022
(Python, JavaScript, Django) IJNGC   Project Link
• Led a cross functional team to design an interactive UI for grammar exercises tailored to grades 8-12 for the platform of the product.
• Conducted user research on effective learning methods for kids and integrated findings into the design process.
• Developed an algorithm with 90% accuracy for generating infinite sentences with complex clauses.
• Organized and oversaw testing sessions with students and educators, refining the tool to improve usability and learning outcomes.

Detection of Glaucoma in Eye using Retinal Images, Centre of Microsystems, India   Jan 2022 - June 2022
(Tensorflow, CNN, OpenCV, Matplotlib)IEEE
• Researched and developed a glaucoma detection system using image segmentation and machine learning, achieving 0.88 accuracy and sensitivity by leveraging TensorFlow and a U-Net architecture to segment key indicators from retinal images.