Manan Agrawal

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Seeking a software developer position to build scalable applications using my experience in cloud automation and backend services.

Education

7.71/10 **BITS Pilani | Pilani, India**, M.Sc. Economics and B.E. Electrical & Electronics   *Aug 2019 - July 2024*
Achievements: Got Merit-Cum-Need Scholarship among 10% students of BITS Pilani
Courses: Probability and Statistics | Computer Programming | Object Oriented Programming | Operating Systems

Experience

Nielsen, *Member of Technical Staff 1* | Gurgaon   *Jul 2024 - Present*
- Slashed **AWS operational costs** by **80%** through deep-dive resource optimization and infrastructure streamlining.
- Automated **90%** of AWS deployments with **Terraform** and **Gitlab CI/CD**, leading to faster, more reliable, and scalable releases.
- **Re-architected** a core client onboarding service built on **Python** and **Kubernetes**, transforming it into a highly flexible, configuration-driven model, streamlining the end-to-end onboarding process by **70%**.
- Engineered a **full-stack** internal platform using **React** and **FastAPI**, decreasing new team member setup time by **80%** and boosting overall operational efficiency.

Amazon Development Centre, *Software Development Engineer Intern* | Gurgaon   *Jul 2023 - Dec 2023*
- Boosted **response time by 30%** by integrating **AWS CloudWatch** enabling Anomaly Detection alarms during deployment
- Created an **AWS Lambda** exception handler, improving error management by routing message to **SQS** DLQs based on exception type
- Increased **test coverage from 33% to 91%** by creating over 50 **Mockito unit tests** for a **Spring-based service**.

MCEME Secunderabad, *Research Intern* | Remote   *May 2021 - July 2021*
- Fine-tuned **Mozilla DeepSpeech** model to accurately transcribe spoken Chinese into text
- Achieved a maximum BLEU score of **0.32** with a Chinese to Hindi text translator designed using an **LSTM-based** model
- Implemented end-to-end usage of the ML model by integrating it with a **Python-based GUI** and **IoT** devices

iLRNU Inc., *Fullstack Developer Intern* | Remote   *Sep 2020 - Dec 2020*
- Collaborated with the team on the 2.0 update of the **React.js website**, revamping the design and introducing new functionalities.
- Enhanced the **user-friendliness** of the main website, leading to a **20% surge in daily user count**.
- Conducted a seamless migration of the existing **Node.js-written MySQL database to MongoDB collections**.

Skills

Programming	Python, C/C++, Terraform, Java, JavaScript, Scala, OOPs, OS, AWS, Git, Typescript, HTML/CSS
Frameworks	React JS, NodeJS, Spring Boot, Spark, FastAPI, TensorFlow, PyTorch, React Native, Flutter, Django, Flask
Software	Linux, Docker, OpenCV, Figma, Adobe XD, CorelDraw, AutoDesk, Scipy, Numpy
DSA	Proficient in core concepts, with **300+** problems solved on **leetcode**.
Certifications	Deep Learning Specialization, DeepLearning.AI – (2021)	Machine Learning, Stanford Online – (2021)

Projects

Understanding Impact of Managerial tone of Firm Value   *Aug 2022 - Jul 2023*
Supervisor: Dr. Byomakesh Debata
- Analyzed annual reports of more than **500 companies** Annual Reports from NSE using text-to-numerical analytics
- Attained a **91%** accuracy in utilizing a fine-tuned **finBERT** model to discern the correlation between managerial tone and Firm Value

Google BERT QA on SQuAD Dataset   *May 2022 - Jul 2022*
Personal Project
- Achieved an EM score of **86.9** and an F1 score of **93.15** by implementing Google BERT on the SQuAD dataset
- Optimized the model to handle context documents over 512 words efficiently, and integrated React JS for user-friendly usage

Enhancing UAV-Captured Pavement Imagery in Poor Visibility   *Jan 2022 - April 2022*
Supervisor: Dr. Pratik Narang
- Created a cutting-edge deep learning pipeline for pavement health monitoring, overcoming limitations in low-visibility conditions
- Attained **93.34%** accuracy with an inference time of **0.154 sec.**, offering efficient solutions for road health monitoring tasks

Position Of Responsibility

Department of Visual Media, *BOSM Coordinator*   *Aug 2021 - Jul 2022*
- Led a team of **35 members** to develop website and handle registrations for BPL 2022, with over **1500+ team registrations**
- Contributed to the development of websites for renowned BITS festivals as a member, accommodating footfalls **exceeding 100,000**.
- Implemented payment, login, and registration procedures utilizing technologies like **React, Django**, meeting production standards.

NSS BITS Pilani, *Coordinator*   *May 2021 - May 2022*
- Conceptualized and led a cross-functional team of 6 in the creation of the **official website** for NSS BITS Pilani in **React.JS**
- Planned and organized the first online educational initiative in the organization for students from 6th to 10th class.