Sonam Bharti

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Education

Indian Institute of Technology Jammu, Jammu **Sep 2021 - Jun 2023**
Master of Technology in Computer Science and Engineering *CGPA - 8.25/10*

Nalanda College of Engineering, Chandi, Bihar **Aug 2017 - Sep 2021**
Bachelor of Technology in Computer Science and Engineering *CGPA - 8.28/10*

Skills

Programming Languages: C/C++, Java, Python, HTML5, CSS3, JavaScript
Databases: MySQL, Redis, MongoDB
Developer Tools: Linux, Git, GitHub, Postman, Docker, AWS
Frameworks/Libraries: Numpy, Pandas, React JS, Node JS, FastAPI, REST API
Subjects: Data Structures, Operating System, OOPs, DBMS, Computer Networks
Soft Skills: Troubleshooting, Time Management, Problem-solving, Documentation, Leadership

Experience

Full Stack Developer I | Saarthi.ai , *Bengaluru* **Aug 2023 – Present**

- Collaborated with **cross-functional teams to develop, enhance features and maintain** code base of multilingual conversational AI bots, reducing time-to-market by **50%** through efficient project delivery.
- Resolved critical production issues by conducting in-depth **debugging and root cause analysis** (RCA), significantly enhancing user experience (UX) and reducing support ticket volume by 50%.
- Developed a **generative AI** bot with Gradio & **Prompt Engineering**, implemented **RAG Large Language Model** bots, and reduced the lifecycle of new bot products from 5 days to 1 day.
- Enhanced NLU and NER accuracy by 20% through label dictionary optimization of synthetic datasets for BFSI clients, and **automated** data preprocessing with Python scripts, reducing processing time by 60%.
- Implemented solutions to **identify new entity through NER** for 3 verticals, **trained**, **fine-tuned** and deployed **NLU-NER models** on AWS cloud environment using Docker.
- Engineered and **optimized voice/WhatsApp bots in Agile methodologies**, reducing response delay by 40% and infrastructure cost-effectiveness by up to 30%-40% annually.
- Developed **REST API**, using **CRUD** functionality, and create a microservice to enable **robust data pipline** between client databases and our system for seamless integration.
- Deployed multiple Docker images on Kubernetes, utilizing **CI/CD pipelines** to reduce deployment delays by 15%-20%.

Tools: *Python, Flask, FastAPI, Javascript, Node JS, RESTful API, AWS, Docker, MongoDB, Redis, Kubernetes, Postman, Git, Github, Prompt Engineering, LLM, Langchain, and GenerativeAI*.

Projects

Privacy Preserving SSI Framework For Biometrics Over Blockchain using Hyperledger Indy | *Python, React*

- Designed and built a zero-knowledge proof architecture for decentralized ledger-based identity management.
- Formulated the RXBP method with 85% accuracy to transform Iris templates, integrating it into the architecture.
- Built UI platform and incorporated Pseudo-Biometrics to establish unique person identification within the architecture.

Improving Deep Learning Model using Data Augmentation and Transfer Learning | *Python, Pandas, Tensorflow*

- Implemented transfer learning with Xception architecture using ImageNet weights to classify Simpson image dataset.
- Applied data augmentation to create more different geometrical transformed images to reduce overfitting of model.
- Evaluated data augmentation's efficiency, comparing it favorably to the Transfer Learning method for Simpson dataset.

Vicinus - An Ecommerce Website | *HTML, CSS, Javascript, PHP, MySQL*

- Created a dynamic platform for local markets, facilitating seamless buying and selling through website registration.
- Integrated a database to manage user records, product details, and seller information for the platform.
- Spearheaded frontend and backend development, ensuring seamless project execution and team coordination.

Notepad Clone | *Java, and its libraries (swing, io.net and Java AWT API)*

- Constructed an interactive, clone of the Notepad Text Editor using Java.
- Validated and maintained the application to uphold user requirements and expected performance.

Car Rental System | *C++, OOPs*

- Created a reliable desktop application for car rental services.
- Applied Object-Oriented Programming for optimized application logic.

Scholastic Achievements

- Ranked in the top **4%** among **GATE 2021** Computer Science candidates, showcasing exceptional aptitude.
- Attained **top 3** position in B.Tech third year, earning prestigious Academic excellence award.
- Achieved **under 25th rank** in the HCL First Career Grand Quest 2021, a national-level competition.
- Secured **3rd position** in TEQUIP3 hackathon organized by LNJPIT, Chapra, Bihar, demonstrating coding prowess.
- Demonstrated DSA problem-solving skills over **300 challenges** on Platforms like **GeeksForGeeks**, **Leetcode**.

Position of Responsibilities

Teaching Assistant | IIT Jammu , *Jammu and Kashmir*   **Sep 2021 - May 2023**

- Assisted Assistant Prof. Harkeerat Kaur in Design Analysis Algorithm Lab assignments and exam evaluations.
- Collaborated with Associate Professor Supantha Pandit (DAIICT) on Optimization Lab assignments.
- Supported Associate Prof. Bruhadeshwar Bezawada with Operating System Lab assessments, and evaluations.