KRISHNA NAGPAL

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EDUCATION

Birla Institute of Science and Technology, Pilani   Dubai, UAE
Bachelor of Engineering, Computer Science   August 2023 – June 2027
Relevant Coursework: Data Structure and Algorithm, Object Oriented Programming, Java, C, Graphs and Algorithms, Logic, Linear Algebra, Calculus

WORK EXPERIENCE

Coding Instructor   March – June 2024
OAK GROVES   *Bangalore, India (Hybrid)*
- Taught programming languages like **Python, C,C++, Java, and MIT App Inventor**.
- Developed and implemented interactive **coding challenges** and **real-world projects**, enhancing students' logical thinking and coding efficiency by 35%.

Lead-AI Student Community   March 2023 – Present
Intel & CBSE   *Delhi, India (Hybrid)*
- Led a community of **50,000+ members**, organizing **50+ sessions** on AI topics like **TensorFlow, NLP, and Neural Networks**, enhancing engagement by **40%**.
- Collaborated with **industry leaders** and institutions to host workshops, enhancing technical skills across participants.

PROJECTS

Face Detection System   October 2024
Python, OpenCV, Deep Learning, Hugging Face Transformers
- Developed a **real-time face detection system** using **OpenCV and deep learning models**, achieving an **accuracy of 95%** in various lighting conditions.
- Integrated **Hugging Face Transformers** for feature extraction and fine-tuning, enhancing model robustness and reducing false positives by **20%**.
- Implemented **Haar cascade classifiers and CNN-based detection models**, optimizing the detection speed by **30%**, ensuring efficient performance in real-world applications.

Interactive Financial Analysis Tool   August 2024
Python, Flask, Ngrok, Llama
- Engineered an **AI-powered chatbot** solution to **analyze unstructured financial reports**, improving document **analysis speed by 25%.**
- Integrated **Llama** to enable accurate **NLP-driven insights extraction**, enhancing **query resolution efficiency**.

IntellInspect   February 2024
Django, OpenAI, OpenCV, TensorFlow
- Developed an **educational tool** to test the understanding of student-written essays through video answers.
- Leveraged **OpenAI API** to craft questions and verified students' submissions using gaze tracking from **OpenCV**, reducing cheating by **30%**
- Deployed NLP algorithms for plagiarism checking and built a robust user-friendly platform using **Django**

Geospatial Campus Routing System   November 2024
JavaFX, Git, Maven, JSON Parsing
- Implemented **Dijkstra's route optimization algorithm** for campus route optimization with **Maven-managed JSON geospatial** data parsing in Java.
- Developed **JavaFX** campus navigation system using **JSON libraries** and **real-time GPS coordinate** processing.
- Designed scalable object-oriented architecture leveraging **Java 11 stream API** for **dynamic routing mechanisms.**

TECHNICAL SKILLS

Languages: Assembly, BASH, C, C++, HTML/CSS, Java, JavaScript, Python, SQL

Tools & Frameworks: FastAI, Flask, Git/GitHub, LaTeX, Maven, NumPy, OpenCV, Pandas, PyTorch, Scikit-learn, Statsmodels, TensorFlow, Tableau, Docker, JavaFX, Hugging Face Transformers, Vercel, Google Colab, Linux

Core Skills: Machine Learning (Supervised & Unsupervised Learning, Model Optimization), AI Agent Development, Data Structures & Algorithms , Computational Logic

ACHIEVEMENTS

- **Runner-Up in Smart India Hackathon, Software Edition 2024** in problem statement under AICTE among 1 lakh students over various categories.
- **Top 50 Finalist, Intel YUVAI Bootcamp** - Selected from **1,000+** participating teams.
- **Recipient, Udacity Nanodegree Scholarship (Bertelsmann Technology Scholarship**) – Awarded for excellence in Python and foundational machine learning concepts