SHAIL PATEL

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OBJECTIVE

Aspiring software engineer with a strong foundation in full-stack development, machine learning, and data-driven solutions. Eager to contribute to innovative software projects by leveraging expertise in Python, Java, and modern frameworks like Django and Flask. Passionate about building scalable, user-centric applications and continuously expanding my skill set in software engineering and emerging technologies. Seeking opportunities to collaborate on impactful projects that solve real-world problems and drive technological advancement.

EDUCATION

- **NC State University, Raleigh, NC** *August, 2024 - May, 2026*
  Master of Computer Science GPA: 4/4
  Coursework: Software Engineering, Algorithms, Foundations of Data Science, Artificial Intelligence
- **Dharmsinh Desai University, Gujarat, India** *October, 2020 - May, 2024*
  Bachelor of Information Technology GPA: 9.06/10
  Coursework: Data Structures, Design and Analysis of Algorithms, Computer and Communication Networks, Microprocessor, Database Management, Software Engineering, Advanced Java and Web Technology

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, C/ C++, C#, JavaScript, Prolog, LaTex, MySQL, XML
- **Frameworks:** Django, Flask, ASP.NET, AngularJS, Hibernate, AJAX
- **Tools:** Git, Visual Studio, VS Code, Jupyter Notebook, Google Colab, Netbeans, Excel, Word, PowerPoint
- **Concepts:** Data Structures, Data Preprocessing, Data Visualization, TensorFlow, PyTorch, LLMs
- **Badges:** AWS Cloud Foundations, AWS Machine Learning

INTERNSHIP

- **Research Intern – Machine Learning, Space Applications Centre (ISRO), India** *December, 2023 - March, 2024*
  - Built ML models for **Cloud Detection**, achieving **95% accuracy** with **Random Forest**.
  - Implemented **Feed-Forward Neural Network, Random Forest, LightGBM** for cloud masking requiring **zero human intervention**.
  - Preprocessed **MODIS satellite data** (NASA) for training and validated on **INSAT-3D** (ISRO).

PROJECTS

- **Full-Stack Development | Movie Recommendation System**
  - Revamped a **movie recommendation site** using **Flask, React, MySQL** with personalized recommendations.
  - Enhanced UI/UX with modern design principles and improved performance using **optimized database queries and caching techniques**.
  - Integrated algorithms to provide tailored movie suggestions based on user preferences.
- **Full-Stack Development | On-Campus Job Portal**
  - Developed an **on-campus job portal** using the **MERN stack** with features like **real-time chat** and **dark mode**.
  - Designed and implemented a user-friendly interface for students and recruiters to interact seamlessly.
  - Utilized **MongoDB** for efficient data storage and retrieval, and **Node.js** for backend services.
- **LLMs | AI-Powered Image Captioning**
  - Developed an **Image Caption Generator** using the **Flickr30k dataset** (31K images) with **ResNet50 + Transformer** and **InceptionV3 + LSTM**.
  - Achieved **Bleu Score: 0.1688, CIDEr Score: 0.5560**, competitive with state-of-the-art models.
  - Implemented feature extraction, data preprocessing, and optimized training using **PyTorch, TensorFlow, Hugging Face**.
- **Browser Extension | SimplyClip–Cross-Browser Clipboard Extension**
  - Developed a cross-browser extension enabling a singular, shared clipboard for research students and professionals.
  - Enhanced workflow efficiency with features like **multi-text selection, summarization, sorting, and export options**.
  - Built using **JavaScript, Node.js, Python, HTML, and CSS** to ensure compatibility across browsers.

RESEARCH PUBLICATION

Shail Patel, et al. (2023). **Next Word Predictor in Gujarati Language**. In *International Journal of Innovative Research in Science, Engineering and Technology*, DOI: 10.15680/IJIRSET.2023.1210063.