KHUSHI PRASHANT MEHTA

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EDUCATION

University of Southern California **Jan 2025 - Present**

Master of Science, Computer Science

- **Coursework:** Analysis of Algorithms, Foundations of Al, Web Technologies

Indus University **Jul 2019 - Apr 2023**

B.Tech, Information Technology

- **Coursework:** Artificial, Web Development, Data Science, Machine Learning, Cyber Security

PROFESSIONAL EXPERIENCE

USC Marshall School of Business **Jun 2025 - Present**

Teaching Assistant *Los Angeles, CA*

- Facilitated the **instruction** of 'Analytics: The Power of Data for Businesses' for over 40 students, integrating practical machine learning concepts with real-world data analysis.
- Mentored students on **5+ data analysis projects**, emphasizing the application of machine learning techniques and foundational ideas relevant to **deep learning model training** and evaluation.
- Conducted 6 technical review sessions and evaluated 50+ assignments, supporting rigorous academic standards and practical problem-solving skills in data preprocessing and pipeline management.

Hashtechy **Sep 2023 - Dec 2024**

User Experience Designer *Ahmedabad, India*

- Designed **UI/UX for 5+ platforms** across cryptocurrency, e-commerce, and social apps, ensuring intuitive user interfaces and optimized user flow.
- Led app design for the Currently platform, achieving **100k+ installs** and a **100% 30-day** retention rate by leveraging data-driven design insights.
- Conducted A/B testing and usability research with 100+ users to refine design elements and improve overall user experience.
- Collaborated with 10+ developers to implement **15+ responsive UI** components, aligning design specifications with development best practices.

Space Application Center (ISRO) **Jan 2023 - Jul 2023**

Artificial Intelligence/Machine Learning Research intern *Ahmedabad, India*

- Developed and optimized **U-Net Convolutional Neural Networks** using **TensorFlow** on satellite imagery, achieving a **20% enhancement** in glacier classification accuracy for improved environmental monitoring
- Processed over **1,000 Sentinel-2 satellite images** leveraging **Python [e.g., GDAL, Rasterio, NumPy]** for subsequent AI model training and geospatial analysis.Applied Random Forest and K-means clustering for comparative analysis.
- Authored and Presented **2+ formal technical reports** detailing research methodologies technical reports to senior scientific committees.

PROJECTS

Loan Approval Prediction (Python, Streamlit, Hugging face)

- Achieved 81% accuracy with logistic regression to predict loan approval on 600+ applications based on income, credit score, and loan history.
- Developed and deployed a Streamlit UI for parameterized inputs, delivering instant, interpretable predictions and cutting decision time by ~40%.
- Integrated OpenAl's LLM API to generate 100% human-readable explanations of predictions, improving model transparency for non-technical users.

Al Powered Travel Planning Assistant (React, Tailwind, Flask)

- Developed a full-stack GenAI travel assistant using **OpenRouter + Mixtral** for generating personalized itineraries based on user queries.
- Developed Flask backend to process natural language inputs and return itinerary plans.
- Integrated multi-turn memory to handle follow-up queries like ``Add scuba diving on Day 3.'
- Demonstrated a full-stack Generative Al solution optimized for real user needs.

Glacier Classification with Satellite Imagery (PyTorch, ML)

- Constructed a **U-Net segmentation model** in **PyTorch** to significantly improve pixel-level glacier detection by 30% on satellite imagery.
- Applied advanced and preprocessing techniques to large-scale satellite datasets, ensuring high-quality input for model training and analysis.
- Benchmarked and evaluated **unsupervised (K-means) vs. supervised models** for comparative performance, providing data-driven insights.

Sentiment Analysis on IMDB Reviews (Python, Keras)

- Developed a **sentiment classifier** using **LSTM and GloVe embeddings** in **Keras/TensorFlow** on **2000+ IMDB reviews**, achieving **92% accuracy**
- Mitigated overfitting and enhanced model generalization through strategic application of **dropout and early stopping techniques**.
- Visualized and analyzed **training progression** using **accuracy/loss curves and confusion matrices** to thoroughly evaluate model performance.

TECHNICAL SKILLS

- **Programming Languages**: Python, SQL, C++, JavaScript, HTML/CSS
- **ML Libraries**: Scikit-learn, PyTorch, LLMs, Keras, TensorFlow, LangChain, Hugging Face Transformers, Deep Neural Networks, Natural Language Processing, Large Language Models, Computer vision
- **Model Deployment & Tools**: FastAPI, Flask, Streamlit, Gradio, Docker, Google Collab, Jupyter, Django, MLflow
- **Machine Learning Process**: Data Preprocessing, Model Training, Pipeline Management
- **Soft Skills**: Problem Solving, Critical Thinking, Leadership, Teamwork, Communication, Time Management, Adaptability
- **UI/UX Design**: Figma, Adobe XD, User-centric design, wireframing, prototyping, User flows, usability testing

COURSES AND CERTIFICATIONS

- **Machine Learning A-Z: Hands-On Python In Data Science" course**: Udemy
- **IBM Generative Al Engineering Professional Certificate**: Coursera