# Isha Patel

Irvine, CA | +1 (949) 337-2324 | ishampatel01@gmail.com | https://www.linkedin.com/in/ishapatel1108 | https://github.com/Isha1108

## EDUCATION

- **University of California, Irvine | Irvine, CA** Sep 2023 - Dec 2024
  Master of Computer Science
  *Coursework: Machine Learning and Generative AI, Artificial Intelligence, Database and Data Management*
- **K. J. Somaiya Institute of Technology | Mumbai, India** Aug 2019 - May 2023
  Bachelor of Technology - Computer Engineering
  *Coursework: Software Engineering, Data Structures, Analysis of Algorithms, Applied Data Science, Data Warehousing*

## TECHNICAL SKILLS

**Programming Languages**: Python, C++/C, C#, Java, R, HTML, CSS, JavaScript
**Frameworks and Libraries**: Flask, Coreflow, Pandas, Keras, TensorFlow, PyTorch, Sci-Kit Learn, Matplotlib, Seaborn
**Databases and Tools**: MySQL, GitHub, MS Azure, MS Fabric, Power BI, Linux OS, AWS

## PROFESSIONAL EXPERIENCE

**Data Science Intern** | **Engage3** Jul 2024 - Present
- Leveraging machine learning techniques to monitor shopper behavior and competitive prices, ensuring price optimization.
- Conducting Price Image Analysis to compare competitive pricing and determine strategic product investments.
- Analyzing consumer data to pinpoint specific items influencing shopper price perception, driving effective pricing strategies and competitive advantage.

**Machine Learning Intern** | **Arkision.AI, India** Feb 2022 - Jun 2022
- Applied image preprocessing techniques, such as resizing for standardized input dimensions, noise reduction to upgrade image quality, and segmentation to isolate pertinent objects, on real-time surveillance footage.
- Developed an image captioning model achieving 87% accuracy by integrating VGG16 for feature extraction, connecting to LSTM for sequential caption generation, leading to efficient monitoring of the video footage.

**Python Developer Intern** | **Connect Club, India** Jun 2021 - Jul 2021
- Created a robust web application making use of Flask, combined with a MySQL database managed through XAMPP, to provide a startup ecosystem to investors and startups.
- Utilized predictive analytics on historical startup data, empowering investors with insights to make informed decisions and optimize investment strategies based on growth trends.

## PROJECTS

**ELI - *Explain it to me Like I am***
- Fine-tuned a Gemini Pro 1.0 large language model (LLM) using Vertex AI to power ELI, specifically enhancing its ability to simplify text across varying comprehension levels.
- Orchestrated the data preparation and training phases, utilizing a comprehensive custom dataset to cover a broad spectrum of text styles and complexities.
- Integrated the fine-tuned LLM into a React-developed Chrome extension, enabling real-time, dynamic text simplification.

**CancerCare AI | Participated in HackTogether 2024, organized by Microsoft** | Github
- Built a Cancer Care Solution utilizing Microsoft Fabric's tools: Synapse Data Science, Data Warehouse, and Power BI.
- Deployed a chatbot using Azure OpenAI to boost patient interaction within the Cancer Care AI platform.
- Applied data augmentation methodologies, including CTGAN, to enrich dataset quality and diversity, enhancing the efficacy of machine learning model training and evaluation.
- Managed the database infrastructure adopting Fabric's Lakehouse architecture, ensuring efficient data storage and retrieval within the Cancer Care Solution ecosystem.

**Sparkle** | **Winner at Smart India Hackathon, 2022** | GitHub
- Constructed a learning difficulty screening system with 88% accuracy in identifying learning difficulties among children, training an XGBoost model to provide insights into potential types of learning difficulties.
- Leveraged machine learning techniques, including speech recognition and head pose estimation integrated with OpenCV, to innovate the design of screening tests, strengthening accuracy in assessing user responses.
- Elevated learning outcomes and generated detailed progress reports through descriptive data analytics, contributing to a significant improvement in monitoring and lifting each child's intellectual journey.

**puRED** | **Second Runner up at Irada 2022 Hackathon, organized by L D COE, Ahmedabad** | GitHub
- Generated a Random Forest classification model with an accuracy of 95% to diagnose PCOS/PCOD based on the user's symptoms.
- Conceptualized and implemented an intent-based chatbot, using NLP and Tensorflow, to address and alleviate a broad spectrum of menstruation-related queries and concerns.
- Incorporated period cycle monitoring using FullCalendar javascript library to help users track their menstrual health and identify patterns, resulting in an increase in user adoption of these tools.

**Cure-O-City | Finalist in Evathon 2021, organized by University of Limerick, Ireland** | GitHub
- Pioneered a SVM model for disease prediction based on symptoms, achieving 87% accuracy through model training.
- Employed genetic algorithms for feature selection, systematically optimizing feature subsets, which notably refined the model's accuracy to 94%.