

With close to 5 years of experience, I am a skilled Data Scientist specializing in Machine Learning, Deep Learning, and NLP. As the Technical Lead and Co-founder of HelixSmartLabs, I have driven significant business growth and innovation across the manufacturing, healthcare, and financial sectors. I bring a track record of innovative problem-solving, evidenced by national hackathon wins and recognition for my AI research. My solid academic background, coupled with expertise in developing AI strategies and leading cross-functional projects, positions me to drive revenue growth and sustainability through strategic partnerships and collaborative research.

SKILLS & TECHNOLOGY

Statistical Analysis and Modeling: Hypothesis testing, Regression analysis, Time series analysis, ANOVA, PCA, clustering algorithms
Languages: Python, JavaScript, R | **Web/App:** HTML, CSS, React.js, Node.js, React Native, Flask
Frameworks & Libraries: Tensorflow, Open CV, NLTK, Matplotlib, D3, Chart.js, Pandas, NumPy, Scikit-learn
Database: MySQL, MongoDB | **Analytics & Visualization:** PowerBI, Excel
Tools: Linux, Git(GitHub, GitLab), Docker, Google Colab, AWS: SageMaker, EC2, S3, Google Cloud

EXPERIENCE

<p>Team Lead & Co-Founder HelixSmartLabs Faridabad, Hr.</p>	<p>Client Relationship Management:</p> <ul style="list-style-type: none"> Fostered strong client relationships through proactive communication & support. Developed an approach to address client needs within 48 hours, resulting in a 40% increase in client retention. <p>Project Architecture Leadership:</p> <ul style="list-style-type: none"> Led the design and planning of scalable project architectures aligned with strategic business objectives. Implementing microservices architecture and code restructuring increased system speed and scalability, reducing server response time by 40% and improving maintainability, resulting in a 30% decrease in issue incidence. <p>Proposal Development and Stakeholder Engagement:</p> <ul style="list-style-type: none"> Crafted detailed proposals outlining project scopes, timelines, and deliverables. Presented technical strategies effectively to secure projects and align with stakeholder expectations. 	<p>Jun' 20 - Jun' 24</p>
<p>VisiodentX Faridabad, Hr.</p>	<p>Situation: At VisiodentX, the team aimed to enhance patient care by leveraging deep learning technology to automate the analysis of dental x-ray images. Task: My task was to develop a deep learning model that could accurately analyze x-ray images uploaded by patients. The model needed to classify each tooth as either normal, requiring root canal treatment (RTC), fillers, or extraction based on specific dental conditions. Action:</p> <ul style="list-style-type: none"> Conducted extensive research on deep learning architectures suitable for medical image analysis. Curated and preprocessed a diverse dataset of dental x-ray images to train and validate the model. Implemented a convolutional neural network (CNN) architecture optimized for dental image classification. Iteratively trained the model using TensorFlow, fine-tuning hyperparameters to achieve optimal performance. Integrated the model into VisiodentX's platform, ensuring seamless upload and analysis of patient x-ray images. Conducted rigorous testing and validation to ensure the model's accuracy, sensitivity, and specificity across different dental conditions. <p>Result:</p> <ul style="list-style-type: none"> Improved Diagnosis: Successfully developed a deep learning model that accurately classified dental x-ray images, helping dentists quickly identify treatment needs. Efficiency Gains: Reduced the cost and time required for initial diagnosis, enabling prompt patient care decisions. Enhanced Patient Experience: Provided patients with immediate feedback on their dental conditions, enhancing overall satisfaction and trust in VisiodentX's services. 	<p>Nov'23 - May'24</p>
<p>AYNP Systems New Delhi</p>	<p>Situation: At AYNP Systems, the team aimed to innovate the clothing market with their mobile app but faced challenges like high customer churn, random product recommendations, and unfiltered reviews. Task:</p> <ol style="list-style-type: none"> Developing a churn prediction model to reduce customer attrition. Implementing a robust product recommendation pipeline for personalized user experiences. Introducing sentiment analysis and spam detection for reliable review screening. <p>Action:</p> <ol style="list-style-type: none"> Churn Prediction Model: <ul style="list-style-type: none"> Researched and implemented machine learning algorithms using user behavior and purchase data. Deployed the model to predict and mitigate customer churn effectively. Product Recommendation Pipeline: <ul style="list-style-type: none"> Implemented a recommendation system combining collaborative filtering and content-based approaches. Continuously optimized the system for accuracy and relevance. Sentiment Analysis and Spam Detection: <ul style="list-style-type: none"> Developed NLP-based sentiment analysis to extract insights from user reviews. Implemented spam detection algorithms to ensure review authenticity and credibility. <p>Result:</p> <ul style="list-style-type: none"> Improved Retention and User Engagement: Reduced customer churn significantly with the churn prediction model. Enhanced user satisfaction with personalized product recommendations. Ensured genuine feedback and trust with robust review screening. 	<p>May'23 - May'24</p>

<p style="text-align: center;">Oracan Faridabad, Hr.</p>	<p>Situation: Oracan, a dental startup focusing on Oral Cancer and Stem Cell Regeneration research, identified specific fingerprint patterns correlated with higher oral cancer risk based on patients' habits.</p> <p>Task: Develop a biometric pattern recognition system to predict fingerprint types and assess the oral cancer risk probability associated with patients' habits.</p> <p>Action:</p> <ul style="list-style-type: none"> ● Research and Analysis: <ul style="list-style-type: none"> ○ Conducted extensive research on fingerprint biometrics and their correlation with oral cancer risk. ○ Analyzed datasets combining fingerprint images and patient habit data to identify patterns. ● Model Development: <ul style="list-style-type: none"> ○ Designed and implemented a deep learning model architecture suitable for fingerprint pattern recognition. ○ Integrated image processing techniques to preprocess and enhance fingerprint images for model training. ○ Utilized convolutional neural networks (CNNs) to classify fingerprint patterns into specific types. ● Risk Assessment Integration: <ul style="list-style-type: none"> ○ Developed algorithms to generate risk probability levels (low, medium, high) based on identified fingerprint patterns and patient habits. ○ Incorporated statistical analysis to validate the model's predictive accuracy and reliability. <p>Result:</p> <ul style="list-style-type: none"> ● Successfully developed a biometric pattern recognition system capable of identifying specific fingerprint types associated with oral cancer risk. ● Implemented risk assessment functionalities that provide actionable insights for healthcare professionals. 	<p style="text-align: center;">Mar'23 - May'24</p>	
<p style="text-align: center;">BrainAlive Kanpur, U.P.</p>	<p>Situation: BrainAlive aimed to enhance human interaction insights but faced challenges with expensive and non-scalable electrode-based headsets.</p> <p>Task: Develop a scalable solution using AI & Statistics to track eye gaze, emotion, and engagement during live classes.</p> <p>Action:</p> <ul style="list-style-type: none"> ● Created Focii Chrome plugin(for users) & SDK(for developers) for integration into online teaching platforms like YouTube, Udemy, Zoom Call, etc. ● Implemented DL for real-time gaze tracking and machine learning models for emotion & engagement detection. <p>Result:</p> <ul style="list-style-type: none"> ● Provided real-time insights on eye gaze, emotion, and engagement for interactive teaching. ● Empowered instructors with actionable data to improve session interactivity instantly. ● Positioned BrainAlive at the forefront of neuroscience technology in education. 	<p style="text-align: center;">Jun' 21-Jun' 23</p>	
INTERNSHIPS			
<p style="text-align: center;">Software Engineer TCZ Consulting</p>	<ul style="list-style-type: none"> ● Developed a model to predict the regularity of different employees at work based on their activity in the past years with an accuracy of 80% using random forest with hellinger distance. 	<p style="text-align: center;">Jul' 19 - Aug'19 New Delhi, IN</p>	
<p style="text-align: center;">Web Dev Intern LL Lawwise Consultech</p>	<ul style="list-style-type: none"> ● Designed and implemented MERN web app, following a scalable architecture while working in a team of 7 developers. ● Redesigned the nutrition calculator web application with 50% optimized performance. 	<p style="text-align: center;">Jul' 19 - Aug' 19 New Delhi, IN</p>	
<p style="text-align: center;">Cyber Security Trainee DRDO, Ministry of Defense</p>	<ul style="list-style-type: none"> ● Worked with a team of 4 computer scientists to improve the security layer by eliminating injections and enhancing the security of the platform by more than 70%. ● Intensively worked on password hygiene best practices and XSS attacks and set up headers and securing API calls for more than 10 user interactive pages. 	<p style="text-align: center;">Jul' 18 New Delhi, IN</p>	
EDUCATION			
<p>MS. Data Science</p>	<p>New Castle University, UK</p>	<p>First Division</p>	<p style="text-align: center;">2022</p>
<p>B.Tech CSE</p>	<p>Manav Rachna, India</p>	<p>First Division</p>	<p style="text-align: center;">2020</p>
ACADEMIC ACHIEVEMENTS			
<p style="text-align: center;">Grants</p>	<ul style="list-style-type: none"> ● Air Touch Smart Switches: Operated via gestures without physical contact. Ideal for crowded public spaces like lifts and hospitals, as well as home automation. Grant Awarded: £2,700. 		
<p style="text-align: center;">Patent</p>	<ul style="list-style-type: none"> ● Smart Switch: 202011037366 ● Smart Bed for Pressure Ulcer Therapy: 201911053353 ● Airy: 201911040293 		
<p style="text-align: center;">Research Experience</p>	<ul style="list-style-type: none"> ● Customer retention model for e-commerce websites using Gaze Tracking. ● Smart Healthcare Based on the Internet of Things, Springer Journal. 	<p style="text-align: center;">Nov'21-May'22 Sept'18</p>	
<p style="text-align: center;">Awards</p>	<ul style="list-style-type: none"> ● 1st Position International Arduino Hackathon ● Exceptional contribution to the Research Incubator Initiative ● 2nd Position in ESummit, IIT Roorkee, Productathon ● 1st Position Robotics Challenge, Techniche ● Nationals, Microsoft Imagine Cup ● Letter of Appreciation by Prof. Grijesh Prasad, Ulster University, UK ● 1st Position, Innovation in Science & Technology, Dept. of Physics ● 1st Position, Srijan project demonstration ● 1st Position, Hack Infinity Capture the Flag Competition 		