

# Padmaja Mohanty

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## EDUCATION

**University of San Francisco – M.S. in Computer Science**

San Francisco, USA | Aug 2024 - May 2027

**Hazaribag College of Dental Sciences & Hospital– Bachelors in Dental Surgery**

India | Aug 2016 - Jan 2022

## RESEARCH PUBLICATIONS

- Nanoworld - Where Small is Big – [Research Poster Presented at International Dental Conference, BBSR, 2019]  
The research study covers a comprehensive review of the usage of nanotechnology and machine learning in the field of dentistry. I reviewed and explained the latest trends in the field and how technology can be used in various aspects of human lives.
- Mohanty, P. (2022). Training Scheme for Stereo Audio Generation. In: Panda, S.K., Rout, R.R., Sadam, R.C., Rayanoothala, B.V.S., Li, K.C., Buyya, R. (eds) Computing, Communication and Learning. CoCoLe 2022. Communications in Computer and Information Science, vol 1729. Springer, Cham. [https://doi.org/10.1007/978-3-031-21750-0\\_21](https://doi.org/10.1007/978-3-031-21750-0_21)

## PROFESSIONAL EXPERIENCE

**DevApply – Sponsored Project ([Live App](#))**

San Francisco | May 2025-Aug 2025

**AI-powered application tracker: GPT-4o, React, Node.js, Firebase, OpenAI, TailwindCSS, Express, Google Cloud Platform**

- Collaborated with DevApply team to build an AI-powered platform to track applications, journal interviews and enhance resumes.
- Implemented interactive dashboard and real-time auth system, with AI analytics for personalized feedback and AI-mock interviews.
- Productionized and deployed backend services on Google Cloud Platform with OpenAI, Node.js/Express, and Firebase Firestore.

**United Solutions Private Limited, Software Engineering Intern**

Punjab, India | Feb 2022 to May 2022

**Document Management System –React, Node.js, Express, MongoDB, AWS S3, Vite, Tailwind CSS, Mongoose, Typescript**

- Built a robust document management system for fast & secure document storage & sharing, improving team efficiency by 25%.
- Used AWS for document storage and MongoDB to track metadata & permissions, with React for the interactive front-end interface.

**I.K. Electronics, Software Development Intern**

Gurgaon, India | Oct 2020 to Jan 2021

**Integrated Report Generation – React, JavaScript, MongoDB, MySQL, NodeJS, AWS**

- Developed an efficient Integrated Report Generation System using the MERN stack to facilitate team productivity and collaboration.
- Created a frontend for the aesthetic display of reports using React, HTML, CSS, and deployed the app to AWS for scalable access.

## PROJECTS

**UniversityGuideAI - LangGraph, LangChain, Groq, MCP, LangSmith, Reflection, Human in the Loop, Agentic Memory**

- Built a multi-agent chatbot using LangGraph where specialized agents (Researcher, Analyst, Writer) collaborate to answer queries.
- Implemented supervisor-based and hierarchical agent architectures to dynamically assign tasks and generate structured responses.
- Integrated a reflection mechanism to improve result accuracy and safety using human in the loop for feedback on agent responses.

**PaperTalks – DeepSeek, GROQ, Ollama, LangChain, FAISS, Streamlit, Python, React, Node.js, Firebase, RAG**

- Built an intelligent reasoning chatbot for research papers using RAG, PDF parsing, Langchain, DeepSeek-r1, GROQ, and FAISS.
- Developed a dynamic discussion platform allowing users to tag teachers or peers in documents for enhanced collaborative learning.

**Humans of Technology – GPT-4, Java, Spring, React, Firebase, Postman, MySQL, Google Cloud Platform (deployed)**

- Created an interactive museum highlighting notable figures in technology, featuring AI-powered chatbots for dynamic interactions.
- Leveraged the OpenAI API to enable seamless, natural conversational interactions with virtual representations of historical personas.

**Cancer Prediction Using Gene Expression Data – Python, scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, SVM, OpenCV**

- Utilized scikit-learn for model implementation, achieving high accuracy with Random Forest and Support Vector Machine models.
- Conducted extensive data analysis, feature selection, and detailed visualization using Pandas, NumPy, Matplotlib, and Seaborn.

**Heart Disease Prediction Using Cardiovascular Data – Python, Pandas, Scikit-learn, Matplotlib, Seaborn, SVM**

- Conducted comprehensive data preprocessing, feature selection and scaling using Box-Cox transformation for skewness correction.
- Implemented detailed visualization with Matplotlib and Seaborn to analyze feature relationship, detect outliers, and identify patterns.

## TECHNICAL SKILLS

Core Skills	ML, Deep Learning, NLP, Computer Vision, Medical Image Analysis, Frontend, Backend
Language & Libraries	TensorFlow , PyTorch, NumPy, Matplotlib, Pandas, React, NodeJS, JavaScript, Java ,Python, C++
Cloud & Databases	Google Cloud, AWS, Serverless, MongoDB, Firebase , CI/CD, PostgreSQL, MySQL, Docker