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| **Nikhil Chandra Devarasetti** | | | | | | | |  |
| **Contact #** | **Alternative contact #** | **Email Address** | | | **Skype** |  | |  |
| 551-689-1932 | N/A | [nikhildevarasetti@gmail.com](mailto:nikhildevarasetti@gmail.com) | | | N/A | [linkedin.com/in/nikhildevarasetti](https://www.linkedin.com/in/nikhildevarasetti) | |  |
| **Current Location:** | | North Bergen, New Jersey, United States 07047 | | | | | |  |
| **Willing to relocate? If so, please provide the preferred location:** | | Yes, Candidate Ready to Works onsite from Client Location | | | | | |  |
| **Willing to attend in-person interview?** | | No | | | | | |  |
| **Interview Availability**  **(Dates listed must be 48 hours after candidate submission)** | | | | | | | |
| **Time Slot 1 (Date/Time)** | | **Time Slot 2 (Date/Time)** | | | | **Time Slot 3 (Date/Time)** | |  |
| 01/07/2025  10:00AM – 12:00PM EST | | 01/17/2025  01:00PM – 03:00PM EST | | | | 01/20/2025  10:00AM – 12:00PM EST | |  |
| **Time Slot 4 (Date/Time)** | | **Time Slot 5 (Date/Time)** | | | |  | |  |
| 01/20/2025  01:00PM – 03:00PM EST | | 01/21/2025  10:00AM – 12:00PM EST | | | |  | |  |
| **Availability to Start** | | 2 Weeks | | | |  | |  |
| **Notice Period/ LWD on last project** | | Dec 2024 | | | |  | |  |
| **Interviews/ Offers in Pipeline** | | No | | | |  | |  |
| **List All Employment For The Past 7 Years** | | | | | | | |  |
| **Dates of Employment**  **(Month/Year – Month/Year)** | | **Parent Employer Name /Project Company Name**  **i.e. ABC Staffing / Project at XYZ Client Name** | | | | **Location** | |  |
| June 2024 – Present | | SDK Software Inc / ClinDCast | | | | Remote | |  |
| Mar 2022 – Mar 2023 | | NeoSOFT Private Ltd | | | | Bangalore India | |  |
| Sep 2020 – Nov 2021 | | GITAM School of Technology | | | | Bangalore India | |  |
| Sept 2015 – Aug 2020 | | Edge Rock - Tech Mahindra | | | | Bangalore India | |  |
| **Mandatory Skills**  **(As listed in JD)** | | **# of Years’ Experience** | **Candidate’s relevant hands-on experience** | | | | |  |
| Over all IT | | 10+ years | Experience in developing and deploying machine learning models, specializing in Google Vertex AI, AWS Sagemaker, Azure AI services, finetuning LLMs, developing Chatbots, NLP solutions. Proven ability to collaborate with cross-functional teams to deliver scalable, efficient AI models and optimize their performance on cloud platforms | | | | |  |
| Machine Learning(M/L) | | 09+ years | Designed, trained, and deployed machine learning and deep learning models using cloud platforms (AWS SageMaker, Vertex AI, Azure) to address diverse challenges in prediction, retrieval, denoising, and generative AI. | | | | |  |
| AWS, Azure | | 6+ years | Developing, deploying, monitoring Gen AI applications using cloud platforms (GCP, AWS, Azure). Researching on cutting edge technologies in the field of AI, implementing and publishing the work in reputed journals. | | | | |  |
| SageMaker | | 6+ years | Designed, trained, and deployed machine learning and deep learning models using cloud platforms (AWS SageMaker, Vertex AI, Azure) to address diverse challenges in prediction, retrieval, denoising, and generative AI. | | | | |  |
| Vertex AI | | 5+ years | Leveraged advanced cloud resources (A100 GPU, Vertex AI, Azure AI) for training high-performance models, optimizing performance through extensive hyperparameter tuning, data augmentation, and iterative experimentation | | | | |  |
| NLP, LLMs | | 5+ years | Fine-tuned hyperparameters and optimized models, including LLMs, for improved accuracy and efficiency in NLP tasks and Conducted model evaluation and selection, using metrics such as accuracy and F1-score. | | | | |  |
| **Nice to Have**  **(As listed in JD)** | | **# of Years’ Experience** | **Candidate’s relevant hands-on experience** | | | | |  |
| **Additional comments:** | | Good Commutation Skills | | | | | |
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**Summary:**

A highly skilled AI/ML professional with over 10+ years of experience in developing and deploying machine learning models, specializing in Google Vertex AI, AWS Sagemaker, Azure AI services, finetuning LLMs, developing Chatbots, NLP solutions. Proven ability to collaborate with cross-functional teams to deliver scalable, efficient AI models and optimize their performance on cloud platforms. Proven track record of solving complex real-world problems and leading teams in the development of cutting-edge AI solutions. Expertise in prompt engineering, model optimization, and deployment pipelines tailored for ML workloads. Adept at handling and analyzing large-scale unstructured data, building AI tools to automate processes, and implementing reinforcement learning within LLM-based systems. Successfully developed AI-driven chatbots, retrieval-augmented generation (RAG) systems, and domain-specific models for text, image, and video processing. Passionate about leveraging AI to drive impactful results in fields such as healthcare, digital pathology, and customer service​.

**Profile Summary**

* Experienced in solving complex problems in Computer Vision, NLP, and Machine Learning, with hands-on expertise in LLM frameworks (LangChain, LLamaIndex) for building RAG and hybrid search systems. Proficient in prompt engineering with APIs from OpenAI, Vertex AI, and Llama. Developed advanced conversational agents using RASA, driving customer engagement with AI-powered interactions.
* Skilled in NLP solutions (text classification, sentiment analysis, NER) using spaCy, Hugging Face, and NLTK, and adept at applying statistical models and machine learning techniques (XGBoost, Random Forest) for data-driven insights. Led financial sector projects, developing models for loan risk and customer prediction. Experienced in cloud platforms (AWS, GCP, Azure), API integration (FastAPI, Flask), and automation of data pipelines in Linux environments.
* Extensive experience with LLMs (GPT-3, LLaMA) for domain-specific NLP tasks, managing Python environments, and deploying models on cloud VMs for seamless workflows. Strong project leadership skills, successfully delivering AI/ML projects with MLOps integration for diverse environments. Excellent communication skills, effective in leading on-site and offshore teams.
* Expert in Python for chatbot and AI development (RASA, TensorFlow), leading computer vision projects, and prompt engineering for model optimization. Collaborated with DevOps and infrastructure teams for robust ML/analytics pipelines. Experienced in handling complex, high-dimensional data, implementing RL to enhance adaptability in LLM systems, and building AI tools for automation.
* Implemented a state-of-the-art chatbot driven by Natural Language Processing (NLP) to handle customer queries, provide information, and assist with various processes.
* Leveraged AWS, Azure, and GCP for efficient model deployment and management, including expertise in AWS Bedrock and AWS Sagemaker.
* In-depth knowledge of Generative AI for computer vision and deep learning models, contributing to generative models (Maxim, MusicGen) and real-time feedback in ML pipelines. Skilled in data preprocessing, EDA, feature engineering, data visualization, and deploying scalable ML pipelines using PySpark and Databricks.
* Proficient in deep learning architectures (CNNs, RNNs, LSTMs), with expertise in transfer learning (EfficientNet, ResNet50) and generative models (GANs) for image and video applications. Extensive experience in NLP using GPT-3, Gemini, and LLaMA2, building RAG systems and optimizing response accuracy with prompt engineering techniques.
* Expertise in deploying ML models on AWS, Google Cloud, and Azure, utilizing Kubernetes, Terraform, and CI/CD for scalable and automated production workflows. MLOps experience with MLflow, Jenkins, and Docker for streamlined model maintenance. Knowledgeable in vector databases (Pinecone, Elasticsearch) for semantic and hybrid search, and big data tools (Apache Spark, Hadoop) for distributed data processing.
* Familiar with agile methodologies, working closely with stakeholders to align AI solutions with business goals. Strong background in scientific computing (MATLAB, C++) and advanced analytics for custom algorithm development. Delivered impactful AI solutions in healthcare, including disease classification and pathology datasets. Skilled communicator with a proven ability to explain technical results to non-technical stakeholders and collaborate effectively with cross-functional teams.

**Skills :**

* **Key Skills:** Exploratory Data Analysis, Data Manipulation, Data Visualization(Seaborn, Matplotlib, Tableau, Power BI), Data Imputation, Data Augmentation, Data Synthesize, Model Design, Predictive analytics, Web Scrapping, Model Validation, Inferential Statistics, Hypothesis Testing, ML Model Training and Testing, Hyperparameter Tuning, Multiple Linear Regression, Logistic Regression, Clustering, Business Problem Solving, Boosting, Decision Tree, Random Forests, Ensemble Methods, PCA, Regularization, Lasso, Ridge Regression, XGBoost, Time-Series Forecasting, Neural Networks, CNN, RNN, Optimization, OpenCV, Object Detection, NLP, CNTK, spaCy, Gensim, NER model, GTE model, NLTK, Transfer Learning, Image Classification, Image Clustering, Image processing, Text and Video processing, Image Generation, Video Generation, Audio Generation, Text Extraction, Pytesseract-ocr, LSTM, GRU, Nvidia GPU Programming, Nvidia Technologies(Metropolis, Nemo, NIMs, RIVA, Triton, Via) , Cuda, TensorRT, Docker, Kubernetes, Jenkins, MLOps, LLMOps, Pytest, Segmentation, Object Tracking, Image to Text conversion, LLMs, LLaMa, Big Data Analytics, Hugging Face, Transformers, Reinforcement learning, Gym, Prompt Engineering, pattern recognition, fine-tuning models. RAG, AI Agents, Hugging Face, Transformer models, VectorDB, Linux, Snowflake, Google DialogFlow.
* **Tools:** Jupyter Notebook,TensorFlow, PyTorch, JAX, Fastai, AWS (Sagemaker, API Gateway, S3 Bucket , EC2, Bedrock), Google Cloud (Vertex AI, BigQuery, AutoML, Google Kubernetes Engine) Azure Cloud(Azure OpenAI Service, Azure AI Search and Azure Document Intelligence, Azure DevOps, AKS), TensorBoard, MLflow, Colab, Flask, Git, GitLab, Elasticsearch, MongoDB, PineCone, Conda, Spark, QuPath, Grafana, ELK stack, Fast API, streamlit, Terraform, PySpark
* **Languages:** Python, MySQL, PostgreSQL, C++, MATLAB

**Education**

* Master of Science in Artificial Intelligence from Yeshiva University – New York USA - Aug 2023 – Aug 2024
* Post Graduate Diploma in Data Science (Deep Learning) from IIIT Bangalore –India - Aug 2020 – Sept 2021
* Master of Technology in Power Electronics and Drives from NIT Rourkela – India - July 2013 – May 2015
* Bachelor of Technology in Electrical and Electronics Engineering from JNTUH – India - Aug 2008- June 2012

##### Work Experience

##### Client: ClinDCast, Remote June 2024 – Present

**Designation:** **Data Scientist | ML Engineer | Gen AI**

**Key Responsibilities:**

* Developing, deploying, monitoring Gen AI applications using cloud platforms (GCP, AWS, Azure). Researching on cutting edge technologies in the field of AI, implementing and publishing the work in reputed journals.
* Designed, trained, and deployed machine learning and deep learning models using cloud platforms (AWS SageMaker, Vertex AI, Azure) to address diverse challenges in prediction, retrieval, denoising, and generative AI.
* Leveraged advanced cloud resources (A100 GPU, Vertex AI, Azure AI) for training high-performance models, optimizing performance through extensive hyperparameter tuning, data augmentation, and iterative experimentation.
* Applied state-of-the-art architectures such as EfficientNet-b7, DeepLabV3+, and custom decoder networks to achieve high accuracy and performance for tasks like image classification, semantic segmentation, and signal denoising.
* Enhanced retrieval systems by fine-tuning large language models (LLaMA2, Mistral) for Dense Passage Retrieval (DPR), utilizing performance metrics like Mean Reciprocal Rank (MRR) to boost retrieval precision.
* Developed generative models (MusicGen, Mustango) for creative AI applications, including music generation from text prompts, with performance measured through metrics like CLAP scores for audio generation tasks.
* Designed intelligent document processing solutions on Azure, integrating AI-driven text extraction, classification, and large-scale analysis to automate enterprise document workflows.
* Implemented and fine-tuned NLP models, including LLMs, to analyze claims data for potential fraud and used supervised and unsupervised ML techniques to categorize claims as normal or potentially fraudulent.
* Fine-tuned hyperparameters and optimized models, including LLMs, for improved accuracy and efficiency in NLP tasks and Conducted model evaluation and selection, using metrics such as accuracy and F1-score.
* Built scalable data pipelines using PySpark and Databricks for data ingestion, transformation, and preparation, ensuring high data quality and readiness for machine learning workflows.
* Led and collaborated with cross-functional teams to deliver AI/ML projects, ensuring smooth deployment and integration of models across diverse operational environments.
* Experienced in optimization techniques to improve hardware utilization, latency, throughput, and cost in large-scale AI systems. Skilled in leveraging AWS Ultraclusters, NeMo Guardrails, and advanced vector search techniques to enhance system scalability and efficiency.

**Projects:**

* Developed a PyTorch based model on AWS Sagemaker that predicts the points A, B, C, D, E and F and calculated the VHS score. Extensive experiments reveal that our proposed model achieves a performance exceeding 85%. The model utilizes the EfficientNet-b7 architecture, achieving a VHS test accuracy of 85.25%.
* Developed a Deep Learning based Semantic Segmentation for Bird Sound Denoising DeepLabV3b+ model on Vertex AI that presents a novel approach for semantic segmentation using a custom model that incorporates a pretrained DeepLabV3+ encoder combined with a custom decoder network. The proposed approach gives a best Test IoU score of 0.6703 and best Test F1-score of 0.7650 after training it for 40 epochs. This technique might greatly help disentangle clean audio from complex signal mixtures.
* Explored ways enhancing Dense Passage Retrieval (DPR) performance by fine-tuning large language models like LLaMA2 and Mistral on AWS sagemaker. It compares models' baseline performance using the Mean Reciprocal Rank (MRR) score and uses a novel dataset for fine-tuning. The research combines DPR with generative models like GPT and T5 to improve document retrieval and answer generation, showcasing synergies between advanced retrieval and language generation technologies. Through iterative experimentation, strategies like dataset augmentation and parameter optimization are explored to boost performance.
* Developed and deployed a model on Vertex AI that generates music from a text prompt. Worked on Mustango, MusicGen models and developed a custom model that gave me a CLAP score of 0.35. The Dataset the custom model was trained on is Music Bench and tested on Musiccaps data. We trained the model for 5 days on A100 GPU.
* Designed and deployed an intelligent document processing system using Azure AI Search and Azure OpenAI Service for real-time text extraction, classification, and analysis of large-scale enterprise documents

##### Client : NeoSOFT Private Ltd., Bangalore Mar 2022 – Mar 2023

**Designation:** **Machine Learning Engineer** | **Data Science**

**Key Responsibilities:**

* + Researching on fine-tuning LLMs, Image Generation, Video Generation, Classification, Segmentation, Object detection and tracking algorithms such as DeepLabV3+, Yolo, R-CNN, EfficientNetb(0-7), OpenPose, OpenVINO, Maxim, MusicGen, Mustango, Vtoonify, LlaMa etc., and conducting custom modification to suit to client expectations.
  + Developed and deployed client projects such as NeoBot, RASA HrBot, Document Extraction and classification, Text summarization using LLMs from EHR, Image Style Transfer using GANs, Intelligent Search Engine etc.,
  + Developed a customer support chatbot named NeoBot using LLMs for one of our clients.
  + Extensive experience in RASA enterprise chatbot development, building and deploying AI-powered chatbots for diverse business use cases. Skilled in creating scalable and optimized solutions with a focus on performance and efficiency.
  + Experience integrating NLP (Natural Language Processing) and NLG (Natural Language Generation) into chatbots using tools like Spacy, TensorFlow, and NLU. Implemented advanced conversational capabilities to improve user interaction and experience.
  + Hands-on experience with CI/CD pipelines for chatbot deployment, managing version control, and automating testing for RASA chatbots. Skilled in tools like Jenkins, Docker, and Kubernetes for efficient deployments.
  + Developed and maintained automated feedback loops within ML pipelines, leveraging real-time data to refine model accuracy and adapt to changing data trends in production.
  + Implemented GenAI-driven natural language interactions with databases, enabling automated text-to-query workflows that streamline data retrieval based on natural language input.

**Projects:**

* Developed NeoBot, a customer support chatbot for a leading bank, leveraging LLMs to enhance interactions and reduce response times. Built a retrieval-augmented generation (RAG) system on AWS Sagemaker with semantic and hybrid search using GPT-3, fine-tuned LLaMA2, and Hugging Face pipelines for text classification, generation, and entity extraction. Utilized LangChain and prompt engineering to create modular, domain-specific components and optimize task performance. Evaluated NeoBot's performance using metrics like Precision@K and NDCG for retrieval accuracy, and BLEU, ROUGE, and F1 Score for assessing the quality and relevance of generated responses.
* Developed and Deployed Document Classification & Extraction Model on Vertex AI using Yolov5 and pytessaract that effectively extracts the data with an IOU score of around 87% and recall of 96%.
* Developed and deployed RASA HR Bot which is a Chatbot designed specifically to help HR operations. Integrated it with Employee portal and Connecto app.
* Developed and deployed a custom GAN-based model on Google’s Vertex AI for generating super-resolution images from low-resolution (LR) blurry images, tailored for a client project. The model effectively eliminates motion blur, noise, and haze, transforming LR images into high-quality super-resolution outputs. By integrating techniques such as residual learning and multi-scale feature extraction, the model significantly outperformed traditional approaches like OpenCV deblurring, DeblurGAN, and SRGAN. Achieved notable improvements in Peak Signal-to-Noise Ratio (PSNR) and Structural Similarity Index (SSIM), ensuring enhanced image clarity and detail retention. The solution also incorporated adaptive normalization and perceptual loss functions to further optimize image quality, particularly in challenging scenarios involving real-world degradations.
* Developed and deployed an Intelligent Search Engine using Elasticsearch *for one of our Digital Streaming client’s data that* returns closely matched results for wrongly spelt inputs and suggests us the nearest possible keywords. Developed and deployed Flask application that returns Responses based on 3 fields (director name, genre, and language), movies with IMDB\_rating > 5.0. Used Compound queries such as Boolean queries and full text queries such as multi match query to implement this task. Intelligent responses with corrected spelling and should suggest nearest possible keywords. Used n-gram analyser and Team level queries such as Fuzzy Queries to induce intelligence into the search responses. For suggesting nearest possible keywords, I used Search APIs such as suggesters. Tested the Ngrok API using postman. My role in the project is Indexing the Data, flask app development, RestAPI creation.

##### Client : GITAM School of Technology, Bangalore Sep 2020 – Nov 2021

**Designation:** **AI/ML Researcher**

**Key Responsibilities:**

* + Involved in ML/DL Research related to healthcare like Alzheimer disease prediction, lung disease detection, Human Organ Segmentation etc., and mentored around 10 student batches in DL internships.

**Achievements:**

* Stood in 1st position (team) in Virtual Competition organized by IEEE-ICETCI 2021 in association with RRSC-Central, NRSC, ISRO, Nagpur on "Machine learning based feature extraction of Electrical Substations from Satellite data using Open-Source tools". Published a Conference [paper](https://ieeexplore.ieee.org/document/9574043) in IEEE.
* Led the team "Singularity" into finals of AI for Healthcare hackathon an initiative of SINE-IITB, supported by MSH, MEITY and organized by DERBI foundation in AUG-2021. Winners – AI for Healthcare Hackathon (aihackathon.in).

**Projects:**

* + The goal was to explore the feasibility of extracting electrical substations from high resolution satellite data using deep learning algorithms. The developed software can automatically extract the substation features and draw the boundary around after training the model with the Area of Interest (AOI) of Substations features. The approaches used are based on U-Net, Google developed DeepLabV3+, R-CNN, Mask R-CNN combined with different pre-processing and post-processing techniques, data augmentations and custom losses. DeepLabV3+ proved to be the best model developed with best IOU score of 0.858016 and the final kappa score of 0.915711 on evaluation set. Refer the [paper](https://ieeexplore.ieee.org/document/9574043) here.
  + Developed and Deployed a Multi-Class, Multi-Output model on Vertex AI classifying 4 Diseases and 3 conditions, overall, 7 classes. We used EfficientNet-b6 Architecture that is built on ResNet50. We got a best Validation F1-Score of 82.35%. The Machine Learning Framework used is PyTorch. We trained the dataset on EfficientNet-b6 architecture which is built on ResNet50 with an image size of 528 pixels, batch size of 2, Max-Epochs = 200, Learning Rate = 0.001. Developed a Flask application for this project and deployed it on Google cloud using GKE for scaling as per the requirement.

##### Client : Edge rock - Tech Mahindra, Bangalore Sept 2015 – Aug 2020

**Designation:** **Data Scientist**

**Key Responsibilities:**

* + Analyzed statistical data; imported data from multiple data sources and Data bases like MongoDB, SQL, Neo4j etc., joined datasets, cleaned & preprocessed, data wrangling and visualizations. Identified and implemented statistical models including linear models, multivariate analysis, stochastic models, sampling, optimization, time series analysis, Image Classification, Image Segmentation, Object Detection. Deployed the models on cloud.
  + Worked In client facing team to demo the product developed and demo the use cases as per the requirement.
  + Analyzed statistical data; imported data from multiple data sources and Data bases like MongoDB, SQL, Neo4j etc., joined datasets, cleaned & preprocessed, data wrangling and visualizations. Identified and implemented statistical models including linear models, multivariate analysis, stochastic models, sampling, optimization, time series analysis, Image Classification, Image Segmentation, Object Detection. Deployed the models on cloud.
  + Employed Python's data science libraries, such as Pandas, NumPy, Seaborn, SciPy, Matplotlib, scikit-learn, NLTK, and spaCy, to develop and fine-tune machine learning algorithms, enhancing model performance and predictive accuracy.
  + Proficient in designing and developing RESTful APIs using Flask to facilitate seamless integration and interaction with machine learning models. Experienced in building scalable and efficient endpoints, ensuring secure data handling, and optimizing response times to enhance accessibility and functionality for end users
  + Worked In client facing team to demo the product developed and demo the use cases as per the requirement.
* Designed, developed, and deployed predictive models for client-specific business challenges, delivering measurable impact on retention, conversion, and revenue goals.
* Conducted feature engineering to enhance model precision and interpretability, creating advanced features tailored to specific business use cases such as customer churn, lead scoring, and high-value segment targeting.
* Applied machine learning algorithms (Logistic Regression, Random Forest, XGBoost) and deep learning models with optimized hyperparameters, employing techniques like Bayesian Optimization, stacking, and cross-validation to improve model accuracy and robustness.
* Generated and evaluated multiple machine learning models using frameworks such as Signal Hub, employing cross-validation, log loss function, ROC curves, and AUC metrics for robust feature selection and model evaluation.
* Leveraged AWS SageMaker to build, train, tune, and deploy cutting-edge machine learning and deep learning models, achieving optimal model performance and seamless deployment into production
* Addressed data imbalance issues through techniques such as SMOTE and ensemble methods, ensuring reliable and balanced model performance across various datasets.
* Developed end-to-end scalable machine learning pipelines on AWS SageMaker using Docker, enabling real-time monitoring, automated feedback loops, and adaptive model adjustments based on evolving customer behavior.
* Utilized SHAP analysis and other interpretability tools to provide actionable insights, supporting targeted strategies for customer retention and improved lead conversion.
* Collaborated with stakeholders to define key performance metrics, align model outcomes with business objectives, and deliver high-impact solutions that enhance decision-making and operational efficiency.
* Leveraged cloud resources (AWS SageMaker) and containerization (Docker) to streamline deployment processes and ensure scalable, efficient model operation in production environments.
  + Worked on client ML projects such as Telecom Churn Prediction, Improving marketing productivity, Loan Risk assessment, Gesture Recognition etc.,

**Projects:**

* Developed and deployed a predictive model for one of our Telecom client to identify high-value telecom customers at risk of churn, achieving around 90% recall, with an estimated ROI of 200% and retention rate improvement of 12% among high-value segments. Defined customer lifecycle phases (Good, Action, Churn) to enable early detection of churn risk and engineered advanced features like average recharge amount, usage patterns, and competitor interactions to improve model precision and interpretability. Addressed data imbalance using SMOTE and ensemble methods, leveraging Logistic Regression, Random Forest, and XGBoost with optimized hyperparameters via Bayesian Optimization and stacking for robust performance. Built a scalable, end-to-end pipeline using Docker and AWS SageMaker, with real-time monitoring and an automated feedback loop to continuously adapt to evolving customer behavior. Leveraged SHAP analysis for interpretability, providing actionable insights for targeted retention strategies tailored to high-value customers, contributing significantly to revenue preservation and customer loyalty.
* Developed a Random Forest model with an accuracy of 90.16% and 87.6% on test and training sets respectively and found out the developed model is reliable. The training is done using 4-fold cross validation scheme which ensured our test set accuracy is better to training set accuracy. And finally developed an ensemble-based deep learning model with optimal feature selection was used to improve accuracy. The Adam optimizer is used to adjust the three-layer neural network architecture weights. Our proposed model gives an accuracy of 94% on test set which is better than all the existing models. Developed and deployed it using Amazon SageMaker.
* One of our clients sells online courses to industry professionals. On any given day, many professionals who are interested in the courses land on their website and browse for courses. The Company has appointed me to help them select the most promising leads, i.e. the leads that are most likely to convert into paying customers. The company requires you to build a model wherein you need to assign a lead score to each of the leads such that the customers with higher lead score have a higher conversion chance and the customers with lower lead score have a lower conversion chance. The CEO has given a ballpark of the target lead conversion rate to be around 80%. Obtained the best recall score of 91%, which proves that the model developed successfully increased productivity as far as time, efforts is concerned. In turn, ROI is improved as manpower and time is reduced by satisfactory margin.

##### Client: Capgemini, Hyderabad July 2012 – July 2013

**Designation:** **Software Engineer**

**Key Responsibilities:**

* Developed and maintained RESTful APIs using Python to enable seamless data exchange between applications.
* Designed and optimized PostgreSQL and MongoDB databases for scalable and high-performance data storage solutions.
* Collaborated with cross-functional teams to deploy and maintain software applications, ensuring smooth production deployment and minimizing downtime.
* Implemented end-to-end testing and debugging processes to improve the reliability and performance of API services.
* Streamlined application deployment through automation tools, reducing manual intervention and ensuring faster delivery cycles.