Mithil Sai Jakka

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Summary

A results-driven and innovative M.S. graduate in Computer Technology from Eastern Illinois University, I specialize in areas such as Machine Learning, Data Science, Cloud Computing, and AI/ML solutions. Over the course of my career, I have amassed over 2 years of professional experience, including impactful internships and my current role as an AI/ML Engineer at Healthcare Triangle, where I contributed to AI models achieving up to 92% accuracy in healthcare data analysis. My expertise spans across advanced technologies like Python, C++, React, TensorFlow, and AWS, and I have led data-driven projects that optimized system performance, improved data quality by 30%, and enhanced user engagement by 25%. In addition to hands-on project work, I have authored conference papers published in IEEE and contributed to open-source software. With a proven track record in deploying cloud-based solutions, automating data pipelines, and leveraging cutting-edge tools such as AWS, Azure, and GCP, I am recognized for strategic problem-solving, collaborative team leadership, and delivering impactful solutions that bridge the gap between complex data and actionable business insights. My passion for continuous learning and advancing technology fuels my drive to contribute to innovation in every project I undertake.

Skills

Python, C++, Java, SQL, React, Angular, JavaScript, TypeScript, HTML, CSS, C, TensorFlow, Scikit-learn, AWS, GCP, Firebase, Vertex AI, Google Cloud, Cloud Computing, Cloud Architecture, Git, DevOps, Agile, RESTful APIs, Microservices, Data Structures, Machine Learning, Deep Learning, NLP, Data Analytics, Data Science, Bioinformatics, Computational Biology, Genomics, Cloud Security, Data Preprocessing, Feature Engineering, Data Visualization, Power BI, Tableau, Data Mining, Big Data, NoSQL, Apache Kafka, AWS Lambda, SQL Server, MySQL, PostgreSQL, Oracle, Docker, Kubernetes, Jenkins, Terraform, Apache Spark, Hadoop, Azure Data Factory, Azure Databricks, AWS SageMaker, GitHub, Jira, Selenium, MongoDB, Flask, Django, AngularJS, Spring Boot, Node.js, Scrum, Waterfall, TDD, BDD, CI/CD, Data-Driven Decision Making, Model Deployment, Problem Solving, Team Collaboration, Cross-functional Teamwork, Communication, Project Management, Leadership, Innovation, Critical Thinking, Stakeholder Management, Strategic Thinking, Client Interaction, Business Intelligence, Project Leadership, User Experience, User-Centered Design, Continuous Learning, Time Management, IBM Data Science, Python for Everybody, Machine Learning with TensorFlow on Google Cloud Platform, AWS Certified Solutions Architect, Microsoft Certified: Azure Data Engineer, Google Cloud Certified - Professional Cloud Architect, Professional Scrum Master, Machine Learning Models, Predictive Analytics, System Optimization, Data Security, Efficiency Improvement, Cost Reduction, Sales Growth, Enhanced User Engagement, Automation, Workflow Optimization, Process Improvement, Market Trend Analysis, Algorithm Optimization

Projects

The Opulent Slots: Refined Parking System **June 2020 - July 2020**
Sathyabama Institute of Science and Technology

- Analyzed data from various resources over the web and derived an optimized solution by collaborating in integrating the Twilio WhatsApp API.Deployed the website with a minimal approach for the user, resulting in a 25% increase in user engagement.

HTML, CSS, JavaScript, Adobe XD, API Integration

Elegant Logistics Management System Empowered by Angular 12 **Oct 2021 - Nov 2021**
CREDO SYSTEMZ

- Incorporated Firebase for secure authentication and data storage, implementing responsive design for optimal performance on all devices. Developed an intuitive logistics management system using Angular 12, reducing manual data entry efforts by 40%.

Angular 12, JavaScript, Firebase, CSS, Responsive Design

Categorization of Integumentary System Disorders Using Deep Learning **Sep 2021 - Apr 2022**
Sathyabama Institute of Science and Technology

- Created a deep learning model with TensorFlow to classify four types of skin diseases, leveraging transfer learning (Inception v3) to achieve an accuracy of 92%. Preprocessed and engineered features from medical image data, employing techniques like data augmentation and normalization, increasing the training dataset size by 40%. Collaborated with a cross-functional team, including bioinformatics and computational biology experts, to ensure clinical relevance and model interpretability.

TensorFlow, Bioinformatics, Computational Biology, Data Science, Machine Learning, Feature Engineering

Enhancing the Fresno State Digital Landscape: A User Experience Transformation **Oct 2022 - Dec 2022**
California State University, Fresno

- Conducted user research and analyzed data from over 500 participants to identify pain points and opportunities for improvement in the university's digital ecosystem. Developed UI/UX wireframes and prototypes using Adobe XD, incorporating best practices in user-centered design. Presented redesign proposals to stakeholders, resulting in the implementation of three major feature enhancements, improving user satisfaction by 25%.

Adobe XD, React, User-Centric Design, Wireframing, Prototyping

The React Storm: A Dynamic Weather Application **Nov 2023 - Feb 2024**
Eastern Illinois University

- Incorporated multiple APIs, including OpenWeatherMap and Google Maps, to retrieve real-time weather data and location-based information. Implemented responsive design using React and CSS to ensure optimal performance on various devices, improving user engagement by 18%. Integrated data visualization libraries to display weather trends and forecasts in an intuitive and visually appealing manner.

React, JavaScript, APIs, CSS, Data Visualization, Responsive Design

Liver Disease Detection on AWS SageMaker **June 2024 - July 2024**
Healthcare Triangle, INC

- Developed an end-to-end liver disease detection model using Amazon SageMaker and XGBoost. The project involved building, training, and deploying the model on AWS. I started by preprocessing the synthetic liver disease dataset, scaling it, and splitting it into training and test sets. Using XGBoost, I trained the model to classify liver disease, achieving strong evaluation metrics like 87.9% accuracy and 92.6% F1 score. The model and scaler were saved for future use, and the final solution was optimized for deployment in a cloud environment using SageMaker. This project provided valuable insights into real-world applications of machine learning in healthcare.

Machine Learning, AWS SageMaker, XGBoost, Data Preprocessing, Model Deployment, Python, Scikit-learn, Cloud Computing

Azure-Powered Customer Insights Dashboard **July 2024 - September 2024**

- Designed and implemented an automated data pipeline to enhance visibility into customer demographics, specifically focusing on gender-based product sales. The pipeline extracted data from an on-premises SQL database using Azure Data Factory transformed it with Azure Databricks for scalable processing, and loaded it into Azure Synapse Analytics. I applied a bronze-silver-gold architecture to organize and clean the data, making it ready for reporting. Finally, I created a Power BI dashboard that visualizes key KPIs, including sales by gender and product category, allowing stakeholders to filter data easily and make informed business decisions.

Data Engineering, Azure Data Factory, Azure Databricks, Azure Synapse Analytics, Power BI, Data Visualization, SQL, Cloud Architecture, Data Pipeline Automation

Experience

Healthcare Triangle, Inc **June 2024 - Present**
AI/ ML Engineer California, United States

I am currently working in the Cloud and Technology Division under the supervision of Prasoon Pathak. My responsibilities include contributing to developing and implementing ML models to improve healthcare data analysis. I am committed to maintaining strict confidentiality and adhering to company policies while gaining valuable hands-on experience in a professional and ethical work environment. I collaborate with cross-functional teams to design algorithms for predictive analytics, patient outcome optimization, and personalized treatment plans, ensuring compliance with healthcare regulations and data privacy standards.

Dell **Oct 2020 - May 2021**
Campus Ambassador India

During my time as a Campus Ambassador for Dell India, I honed my event management and leadership skills while promoting cutting-edge Dell technologies. I orchestrated and managed over five large-scale tech events, reaching more than 1,000 students across my university. My role involved coordinating logistics, fostering engagement, and facilitating the promotion of Dell's products and solutions. I worked closely with both technical teams and students, ensuring a seamless experience for attendees while emphasizing Dell's technological offerings in areas like data security, cloud solutions, and AI integration. This role also sharpened my abilities in marketing, social media management, and public speaking. Through this position, I developed a deeper understanding of the tech industry, learned to present complex solutions to a diverse audience, and gained hands-on experience in driving awareness of emerging technologies in educational settings.

- Enhanced Proficiencies: Event Management, Marketing, Coding.

Sparks Foundation **Sep 2020 - Oct 2020**
Graduate Rotational Intern India

At Sparks Foundation, I worked on the development of a new user experience (UX) and front-end framework for their website. This internship gave me a hands-on opportunity to implement key technical and analytical skills, including Python and JavaScript, for processing and cleaning large datasets. I was tasked with improving data quality on a platform that handled over 5 million records. Through the use of Python libraries, I applied advanced data cleaning and preprocessing techniques, resulting in a 30% improvement in data accuracy. Additionally, I collaborated with a diverse team to ensure that the technical architecture aligned with Sparks' strategic goals. My work here sharpened my skills in React, JavaScript, and data preprocessing, and I also contributed to refining the user experience of the website by integrating efficient frameworks for smoother navigation and interaction.

- Enhanced Proficiencies: React, Python, Data Preprocessing.

Publications

Categorization of Integumentary System Disorders using Deep Learning **2022**
IEEE

- Developed a sophisticated deep learning model leveraging TensorFlow to effectively classify four distinct types of skin diseases. By utilizing learning techniques, specifically Inception v3, we not only reduced the training duration but also achieved superior accuracy levels. This project not only honed technical skills in HTML, SCSS, JavaScript, Flask, and TensorFlow but also fostered soft skills such as logical thinking, polished presentation abilities, leadership qualities, and effective teamwork.

Assessing Exoplanet Habitability through Data-driven Approaches: A Comprehensive Literature Review **2023**
arXiv

- Disseminated in Arxiv, critically examined various data-driven methodologies employed in assessing the habitability of exoplanets. Through an exhaustive literature review, I synthesized existing knowledge and highlighted trends in the field. This endeavor enhanced my research skills, deepened my understanding of astrobiology concepts, and contributed to the broader scientific discourse surrounding exoplanet exploration.

Unraveling the Equifax Data Breach: Lessons Learned and Strategies for Robust Cybersecurity **2023**
arXiv

- Conducted an in-depth analysis of the 2017 Equifax data breach, a significant event impacting approximately 147 million individuals. Delving into the root causes, vulnerabilities, occurrences, variants, and related attacks, I focused particularly on the exploited Apache Struts framework vulnerability (CVE-2017-5638) and its profound implications for data security. Through meticulous investigation, I elucidated the necessity for proactive measures such as timely patch management, comprehensive vulnerability management, and rigorous employee training to mitigate similar breaches effectively. By offering best practices and insights gleaned from this analysis, my paper contributes to the broader discourse on cybersecurity, offering actionable strategies for organizations aiming to bolster their security posture in an increasingly digitized landscape.

Certifications

Microsoft Certified: Azure Fundamentals **October 2024**
Microsoft

Education

Eastern Illinois University **August 2022 - May 2024**
Computer Technology Masters of Science
4.0 CGPA

- Courses: Structures of Programming Languages, Computer Architecture, Human-Computer Interactions, Advanced Software Engineering, Advanced Computer Security, Advanced Database, etc.

Sathyabama Institute of Science and Technology **August 2018 - May 2022**
Computer Science and Engineering Bachelor of Engineering
8.74 CGPA

- Courses: Operating Systems, Data Structures, Design and Analysis of Algorithms, Computer Networks, Machine Learning, Android development, etc.