Vivekanand Reddy Malipatel

Vivekanand Reddy Malipatel | VivekMalipatel | +1 425-766-6468 | vmalipatel@hawk.iit.edu

Education

Illinois Institute of Technology — **January 2023 - December 2024**
Master of Science in Computer Science, (3.72/4.0) — *Chicago, Illinois*

TKR College of Engineering and Technology — **August 2017 - July 2021**
Bachelor of Technology in Information Technology, (8.20/10.0) — *Hyderabad, India*

Relevant Coursework

Machine Learning, Artificial Intelligence, Natural Language Processing, Data Structures and Algorithms, Software Engineering, Computer Networks, Object Oriented Programming, Operating systems, Advanced Database Organisation, Distributed Databases, Database Management Systems, Software Project Management

Work Experience

Illinois Institute of Technology — **May 2023 – December 2024**
Graduate Assistant, Part-Time — *Chicago, Illinois*

- Optimized CRM processes using Salesforce Lightning for application and admission support, resulting in a 60% increase in case resolution rates and 50% faster ticket response times
- Developed an AI chatbot integrated with university data using Retrieval-augmented generation (RAG), leading to a 40% reduction in student wait times and enhancing user satisfaction

PricewaterhouseCoopers (PwC) — **September 2021 – December 2022**
Associate Software Engineer - 2, Full-Time — *Bangalore, India*

- Spearheaded the successful migration of the Guidewire Insurance Suite to the cloud, deprecating legacy systems and configuring critical frontend and backend integrations to work with Guidewire Cloud Console and Amazon S3, resulting in a 30% increase in system efficiency
- Developed scalable and efficient solutions for Guidewire ClaimCenter by utilizing React, Spring, SQL, SOAP APIs, and integrating with Guidewire's GOSU programming language, enhancing application performance by 25%
- Optimized query performance by 40% and reduced transaction times by 25% through enforcing stringent coding and logging standards and leveraging the Guidewire Query API. Led JUnit and SOAP testing efforts, achieving 90% code coverage and reducing client testing time by 40%
- Resolved critical client challenges by facilitating productive interactions, exceeding expectations, and maintaining a 95% client satisfaction rate. Led comprehensive project documentation and deliveries through dry runs, consistently meeting deadlines

Cognizant Technology Services — **March 2021 – July 2021**
Software Developer Intern, Internship — *Chennai, India*

- Managed and transformed large datasets using Informatica PowerCenter, improving ETL workflow efficiency by 30% and optimizing data processing
- Applied Agile/Scrum methodologies using JIRA and Git, enhancing team collaboration and increasing project delivery speed

Technical Skills

Languages	:	*Python, Java, C, SQL, JavaScript, GOSU (Guidewire)*
Web Technologies	:	*HTML, CSS, JavaScript, React, Express.js, Node.js*
Frameworks	:	*PyTorch, Tensorflow, Flask, REST APIs, SOAP APIs, Kafka, JDBC, Spring Boot, JUnit, Transformers*
Developer Tools	:	*Docker, Maven, Git, JIRA, Visual Studio Code, Guidewire Insurance Suite*
Database	:	*MySQL, PostgreSQL, MongoDB*
Other Skills	:	*Linux/Unix, Data Structures, Algorithms, Complexity Analysis, Version Control, Agile/Scrum Methodologies, CI/CD, Debugging*
Soft Skills	:	*Productive, Efficient, Collaborative, Abstract Thinking, Problem-Solving*

Projects

Job Vaults - AI Job Applications Tracker | *Open AI GPT, Apache Kafka, ExpressJS, NodeJS, ReactJS, Regex, Machine Learning, Anaconda, REST, Python*

- Developed "Job Vaults," an AI-driven tool that automatically reads user emails from multiple providers and compiles a consolidated report of job applications, eliminating the need for manual Excel tracking and significantly reducing human error
- Architected a fault-tolerant data ingestion pipeline using Apache Kafka for high-throughput email processing (5K–6K/month/user), employing offset management and multi-threaded Python consumers for robust data cleaning and preprocessing. Integrated fine-tuned GPT 4o mini for extracting job-related entities with 90% accuracy, orchestrated by ExpressJS-based microservices
- Leveraged MongoDB for scalable storage with token-based encryption to protect user data, implemented efficient indexing for rapid lookups, and displayed real-time insights on a ReactJS front end. Maintained a stateless architecture for easy scalability and high availability

Advanced Database Organisation | *lldb, Header files, Makefiles, Linux, Modular programming in C Language, DBMS*

- Co-developed a scalable database storage architecture in C, optimizing buffer and record management while implementing efficient B+ tree indexing, achieving a 30% improvement in file operation speed.
- Implemented multiple page replacement strategies (FIFO, CLOCK, LFU, LRU) in buffer management, improving memory efficiency by 25%. Enhanced record management by designing primary key and tombstone features, and extended B+ tree indexing to support diverse data types, increasing data retrieval speed by 20%

AI-Powered Software Project Planning Tool | *LangChain, AutoGen, OpenAI GPT-4o Mini, Python, Agile & Waterfall Methodologies*

- Implemented a multi-agent system using autogen and LangChain to simulate an end-to-end Scrum and Waterfall workflow, where each Python-based agent (Requirement Engineer, System Engineer, etc.) autonomously generated project artifacts such as requirements, designs, code estimates, and test plans
- Leveraged environment variables via dotenv for secure GPT-4o-mini integration, orchestrating nested conversation flows and extracting structured data (effort estimates, sprint plans) to produce a comprehensive, AI-driven project plan
- Created extensible ConversableAgent classes that handle role-based interactions (Scrum Master, Product Owner), using the conversation logs to dynamically compile final project documentation and backlog items for each development phase

Fake News Classification | *Scikit-learn, Numpy, Pandas, NLTK, Machine Learning, Python*

- Developed multiple supervised machine learning models (Naive Bayes, SVM, Decision Tree, Random Forest) for text classification using Scikit-learn, achieving up to 85% accuracy on labeled datasets
- Performed data engineering and natural language processing, including re-sampling techniques, resulting in an average accuracy of 85% and a precision of 0.83 on test datasets

Certifications

Guidewire InsuranceSuite Developer — **December 2021**
Guidewire Software — *Versions: Dobson, Flaine*