

# Siddharth Verma

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## Education

LNCT Bhopal, RGPV, B.Tech in Electronics and Communication Engineering

Sept 2020 – May 2024

- GPA: 8.42/10.0

## Experience

**Associate Software Engineer, Valuebound – Indore, M.P.**

Oct 24 - Present

### Speech Analysis and Guidance Engine (Sage)

**SAGE** is a call analysis tool that evaluates service center calls across 140+ parameters, including call summary, sentiment, emotional tone, NPA, and agent performance which is used to generate coaching plans for agents and action plans for managers.

- Enhanced audio quality by 30% with noise removal and silence filtering using Demucs and MarbleNet.
- Achieved 80% accuracy in speaker separation and emotion detection with OpenAI Whisper and emotion2vec Large.
- Processed 600+ calls in less than 3 hours using LLM parallelization with multiple Llama 3.1 8B models.
- Ensured 100% structured results via prompt engineering and regeneration loops.

*Technologies: Python, FastAPI, OpenAI Whisper, Demucs, MarbleNet, FunASR, Llama, Nvidia Nemo*

### HR Management System on Chat (HRMS Chat)

[Video](#)

**AI-Powered HR Chatbot** automates HR-related queries, reducing manual workload by 80%. Integrated with Microsoft Teams, Slack, and Keka to streamline employee interactions.

- Improved response quality by 40% using hybrid search.
- enabled one-click forwarding of undocumented queries to HR.
- Reduced leave application and sign-in/out time by 50% by integrating Keka APIs with an AI agent.
- Developed an admin panel in ReactJS with role-based access control, ensuring secure document access.
- Deployed on Azure Virtual Machine, set up automated updates with CI/CD pipelines using Github Actions.

*Technologies: Azure Bot Service, Microsoft Bot Framework, Slack APIs, Keka APIs, ngrok, Nginx, Langchain, GPT-4o, ReactJS*

### Responsibilities and Accomplishments

[link](#)

- Received the Innovation and Execution Award for outstanding contributions from the company.
- Led a team of 4 engineers as Scrum Master, overseeing timelines, task allocation, and daily scrums.
- Developed three POCs from initialization to deployment, all successfully showcased in client demos.

**Software Engineer Intern, Valuebound – Indore, M.P.**

July 24 - Oct 24

### AI Code Assistant (Lask AI)

[Video](#) | [Github](#) | [blog](#)

**VS Code AI Extension** assists developers with code generation, completion, comment generation, and code fixing. Synchronizes with the current workspace or GitHub/GitLab repositories for project context.

- Improved assistant accuracy by 80% using hybrid search, filtered embedding, indexing, and prompt engineering.
- Implemented real-time file synchronization with the Chokidar library.
- Reduced message latency by 100ms in the chat panel with WebSockets.
- Deployed the server on AWS EC2 and published the extension on the VS Code Marketplace.
- Simplified onboarding with a ReactJS registration and download page.

*Technologies: Python, FastAPI, Node.js, Langchain, Google Generative AI, ReactJS*

## Technical Skills

- **Programming Languages:** Java (Proficient), Python, JavaScript
- **Frameworks and Technologies:** FastAPI, Node.js, React.js, Streamlit, HuggingFace, LangChain, Google Generative AI, GroqCloud, SambaNova
- **Cloud Platforms:** AWS (EC2, S3), Microsoft Azure (Azure VMs, Azure Bot Service, CosmosDB)
- **Databases:** MongoDB, Chroma DB, FAISS Index, Pinecone, MySQL
- **DevOps and Tools:** CI/CD with GitHub Actions, Docker, Git, GitHub