

# Apoorav Rao

AI Agent Developer | LLM Integration | Serverless Backend

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## SUMMARY

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Computer Science B.Tech student graduating June 2026 with hands-on experience building production agentic AI systems — multi-step tool-calling loops, autonomous workflow agents, and LLM-powered data pipelines on AWS. Proficient in Python, OpenAI function calling, LangChain, and serverless infrastructure (Lambda, DynamoDB, API Gateway). Proven ability to identify manual workflows and replace them with reliable, production-grade agents with proper failure handling and human-in-the-loop design.

## EDUCATION

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<b>BRCM College of Engineering and Technology</b> <i>B.Tech in Computer Science (Expected Graduation: 2026)</i>	Bahal, Haryana 2022 - 2026
<b>O.P Jindal Modern School</b> <i>12th, CBSE</i>	Hisar, Haryana 2022

## PROFESSIONAL EXPERIENCE

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<b>Data Engineering Intern</b> <i>Caterpillar Signs Private Limited (Group Bayport)</i>	Jun 2024 – Mar 2025 Gurugram, Haryana
<ul style="list-style-type: none"><li>Built an <b>LLM-powered data pipeline</b> ingesting CRM data from Freshdesk and Salesforce APIs, running <b>zero-shot classification</b> and extractive QA on support tickets via LangChain, then transforming and loading into PostgreSQL (AWS RDS) via DBT. Orchestrated with Apache Airflow. Improved <b>ticket auditing efficiency by 400%</b>, <b>reduced ticket volume by 15%</b>, and surfaced <b>20%+ more issues</b> through automated categorization.</li></ul>	

## PROJECTS

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<b>TrainFlow</b>   <a href="https://github.com/apoorav21/TrainFlow">github.com/apoorav21/TrainFlow</a> <i>Python, AWS Lambda, DynamoDB, API Gateway, AWS CDK, OpenAI Function Calling</i>	2025
<ul style="list-style-type: none"><li>Deployed a <b>serverless AWS backend</b> (24 Lambda functions, 6 DynamoDB tables, CDK stack) that ingests 20+ Apple HealthKit biometrics daily and serves them to an <b>agentic AI coaching loop</b>: a context builder pre-loads user health and training snapshots, a tool executor dispatches up to <b>5 OpenAI function-calling rounds per request</b>, and a secondary model generates plain-English health summaries. All user IDs are extracted from Cognito JWT claims — never request bodies.</li></ul>	
<b>Profile Agent</b>   <a href="https://github.com/apoorav21/profile-agent">github.com/apoorav21/profile-agent</a> <i>Python, GPT-5, GitHub API, LinkedIn REST API, LaTeX, SQLite, macOS launchd</i>	2025
<ul style="list-style-type: none"><li>Built an <b>autonomous personal branding agent</b> that monitors GitHub for new repos, analyzes each project (README, languages, screenshots), and generates a LinkedIn post, edits a LaTeX resume, and updates the GitHub profile README — all in a single GPT-4o call. The agent reads the full history of past posts and projects before generating anything so tone rotates and content never repeats. Runs daily via macOS launchd; resume is compiled to PDF by <b>tectonic</b> with automatic project rotation to maintain a one-page constraint.</li></ul>	

## TECHNICAL SKILLS

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**Agentic AI:** OpenAI Function Calling, LangChain, Multi-step Tool Execution, Agentic Loops, Prompt Engineering  
**Cloud & Backend:** AWS (Lambda, DynamoDB, API Gateway, CDK, Cognito, RDS, S3), REST APIs, Python  
**Data & Pipelines:** ETL/ELT, Apache Airflow, DBT, PostgreSQL, SQLite, Pandas  
**Tools:** Git, GitHub API, LinkedIn API, PyGithub,

## ACHIEVEMENTS

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Secured second prize in a collegiate hackathon for problem-solving, coding, and innovation.  
Finalist in a national hackathon organized by IIM Ahmedabad and Ashoka University, selected in the top 10 teams.