

AARYAMAN YADAV

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EDUCATION

Bennett University, Greater Noida
Bachelor of Technology in Computer Science Engineering CGPA: 8.1/10
Specialization: Data Science

(August 2020 - Present)

SKILLS

- **Languages:** HTML, CSS, Javascript, Python, PHP, C++, Typescript
- **Frameworks/Libraries:** React.js, Next.js, Express.js, Passport.js, Flask, TailwindCSS, Radix UI, Prisma ORM
- **Database Systems:** MySQL, MongoDB
- **Tools:** Git, Vercel, Linux, Docker, GCP, Figma
- Proficient in OOP concepts
- Familiar with design patterns and system design concepts

PROJECTS

- Orb - LLM agent for repository navigation** [\[site\]](#) NextJS, FastAPI
- Web app which uses an LLM based agent to navigate and explain code repositories.
 - LLM interprets user queries to determine appropriate tool usage or spawn sub-agents, honing in on the relevant context.
 - Used vector search, keyword search and dynamic file lookup to access relevant code segments.
 - Improved vector search accuracy by using [tree-sitter](#) to generate chunks of specific node types in a code file.
 - Used Text Embeddings Inference server for serving the embedding model (jinaai/jina-embeddings-v2-base-en) with low latency.
- Libello - Open Source Jupyter Client** [\[code\]](#) NextJS, FastAPI
- Developed a clean, uncluttered self-hosted version of Google Colab with a code assistance chatbot in the sidebar.
 - Used **CodeMirror** for code cells enabling syntax highlighting, code autocompletion, etc.
 - Implemented backend to dynamically create Docker containers and initiate user Jupyter sessions, enabling streaming responses to the client via server-sent events.
 - Used Redis for session management.
- Quest - microVM manager** [\[code\]](#) GoLang
- Manager for Firecracker microVMs, facilitating creation, management, and execution of microVMs.
 - Implemented features for starting, stopping, deleting microVMs via CLI commands or API endpoints.
 - Built a CLI tool with commands like init, start, stop, status, list, and delete for controlling VMs.
 - Created an HTTP API for programmatic control of microVMs, including creation, status fetching, and code execution within the VM environment.
 - Enabled running arbitrary code snippets in the microVMs, suitable for code execution platforms.
- Slate - Productivity tool for small teams** [\[site\]](#) [\[code\]](#) NextJS
- Web app to create groups, share task lists, and manage projects on kanban boards.
 - Created a user friendly and intuitive UI using **shadcn/ui** and custom components.
 - Developed a **REST API** using the **Next.js 13** App router.
 - Used **Prisma ORM** for database management.
- Lumen - a knowledge distillation tool** [\[site\]](#) [\[code\]](#) ReactJS, Flask
- Speed up information consumption by summarizing Wikipedia articles and YouTube videos, and performing semantic searches across ebooks, articles, and transcripts.
 - Implemented UI using **ReactJS**.
 - Used paragraph embeddings and cosine similarity to create a semantic search feature.
 - Implemented modules for ebook search, YouTube transcript generation and fetching articles.

CERTIFICATES AND COURSES

- Geospatial Analysis - Kaggle [\[link\]](#)
- Neural Networks and Deep Learning - DeepLearning.AI [\[link\]](#)
- Improving Deep Neural Networks - DeepLearning.AI [\[link\]](#)
- Structuring Machine Learning Projects - DeepLearning.AI [\[link\]](#)
- Fundamentals of Accelerated Computing with CUDA Python - NVIDIA [\[link\]](#)