VINIT RAJ SINGH

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Education

DIT University	Dehradun, Uttarakhand
Bachelor of Technology in Computer Science & Engineering	*August 2023 – May 2027*

Experience:

Second brain | *ReactJS, Node.js, MongoDB, OpenAI GPT-4, Vector Database, Embeddings*   *June 2025 – July 2025*
Description:

A full-stack productivity and knowledge management application called Second Brain, which allows users to create, store, and manage various types of content such as notes, tweets, and documents. Key features include:

- User Authentication System: Implemented secure sign-up and sign-in functionalities using JWT and bcrypt.
- CRUD Operations: Enabled users to add, delete, and manage content entries (notes, tweets, etc.) in their knowledge base.
  - Search with GPT-4 Integration:
  Introduced a smart search system where user queries are:
    - Embedded and matched with their saved content using a vector database.
    - Sent to **OpenAI GPT-4**, along with related documents, to generate highly relevant, personalized responses.
- Shareable Content: Created functionality to generate shareable links for specific sets of user data.

Course Selling App | Node.js, Express.js, ReactJS, MongoDB, JWT/Auth Middleware   *May 2025 – June 2025*
Description:

Built a full-stack application for managing and selling online courses, providing separate functionalities for both users and admins. Key features include:

- Authentication & Authorization:
  -> Implemented secure login and signup for users and admins using JWT-based authentication.
  -> Created middleware for protecting routes and handling role-based access control.
  -> Used dotenv for managing environment variables securely.
- RESTful API Backend:
  -> Designed Express route structure for:
    Users: Sign up, log in, view all courses, purchase courses, view purchased courses.
    Admins: Sign up, log in, create/delete courses, add course content.
    Structured models with Mongoose for: User, Admin, Course, and Purchase schemas.
- Database Integration:
  -> Connected to MongoDB using Mongoose ODM.
  -> Ensured proper schema relationships and indexing for performance.
- Security & Optimization (Optional Enhancements):
  -> Integrated cookie-based authentication as an alternative to JWT.
  -> Implemented rate limiting middleware to secure API endpoints from abuse.
- Frontend Development:
  -> Built a responsive UI using React.
  -> Enabled real-time course browsing, purchase flow, and admin dashboard functionalities.

Technical Skills

Languages: JavaScript, TypeScript, SQL (Postgres), NOSQL(MongoDB), Java
Frameworks: ReactJS, Node.js, Express.js
Developer Tools: MonoRepo, Postman (API testing), Git/GitHub