

Mainak Debnath

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Education

St. Thomas' College of Engineering and Technology

Kolkata, India

B.Tech in Computer Science and Engineering GPA : 9.08/10

Aug. 2018 – July 2022

Technical Skills

Languages: C#, Typescript, Python, C/C++, SQL, HTML/CSS

Frameworks: Angular, .NET, Django, Flask

Developer Tools: Git, VS Code, Jupyter notebook, PyCharm, IntelliJ

Libraries: Pandas, NumPy, Matplotlib

Experience

MRI Software

Bengaluru, India

Software Engineer 2

Feb 2025 – Present

- Led the development work for the integration of **SecureSign**, an e-signature solution, into the Affordable Housing product, enabling clients to sign documents digitally and eliminating manual paperwork.
- Accelerated document turnaround by **70%** across Affordable Housing clients by streamlining signature workflows.
- Coordinated cross-functional rollout across environments, ensuring stable deployment and minimal client disruption.
- Collaborated with product, QA, and infrastructure teams to monitor post-deployment success and gather client feedback.

Software Engineer 1

Aug 2022 – Jan 2025

- Built dynamic, responsive UIs for the Affordable Housing platform using **Angular**, improving usability and streamlining user interactions across key application workflows.
- Implemented **lazy loading** and **pagination** for high-volume components, reducing initial load time by **30%** and improving responsiveness.
- Developed scalable backend logic in **.NET**, reducing API latency by **15%** and increasing application throughput.
- Crafted and maintained efficient **SQL queries** for all **CRUD** operations, ensuring data accuracy and integrity across modules.
- Executed rigorous **unit and integration tests** to validate UI/backend behavior, contributing to a stable, bug-resistant codebase.
- Collaborated closely with QA and product teams to triage issues and accelerate sprint velocity by delivering reliable, test-ready features.

Projects

ReviewPal | *LangChain, Gemini AI, GitHub Actions, Python, REST API*

May 2025

- Engineered an **AI-powered GitHub code review agent** using LangChain and Gemini, automating pull request feedback within ~1.5 minutes.
- Developed tools for fetching PR diffs and posting inline comments via **GitHub REST API**.
- Integrated into CI workflows with **GitHub Actions**, reducing manual review effort by up to **50%**.
- Adopted internally across teams, enhancing code quality and sprint velocity.
- Enabled standards-driven reviews by embedding organization-specific coding guidelines into the agent.

IntelliBlogger | *Python, Django DRF, Angular, Gemini AI, Redis*

Jan 2024 - March 2024

- Engineered a full-stack, AI-driven content platform using **Angular** and **Django REST Framework (DRF)**, automating the conversion of YouTube video links into structured, high-quality blog posts.
- Secured the application by implementing **JWT (JSON Web Token)**-based authentication and authorization features, ensuring robust and granular control over user sessions and API access.
- Implemented a multilayered **Redis caching** system for transcription and content data, cutting repeated response times by **80% (from 25s to under 5s)** and reducing server load by **30%**.
- Enhanced application resilience and stability by configuring granular **rate limiting** across high-traffic DRF API endpoints, effectively managing resource consumption and preventing potential abuse.
- Integrated the Gemini API for advanced Large Language Model (LLM) processing, enabling the conversion of raw transcripts into formatted blog content with an average measured content accuracy rate of **95%**.
- Built an intuitive Angular UI with a rich-text editor for in-browser editing and one-click sharing to external platforms.

Achievements

- Secured **2nd place** in the annual company-wide hackathon for building **ReviewPal**, an AI-powered automated code review agent integrated with GitHub PR workflows.
- Contributed to various open source projects like **numpy**, **freecodecamp**, **sButtons**.