

SHUVOMOY DEY

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Education

Indian Institute of Technology Kharagpur

Aug 2018 – May 2023

B.Tech + M.Tech & Specialisation in AI and Applications

CGPA: 8.27/10

Work Experience

Deloitte India | Kolkata, West Bengal

June 2023 – Present

Consultant - Technology and Transformation

Fixed Asset Registry Tool

- Reduced API latency by **40%** and reduced request fail rate by **25%** through migration from .Net Core framework to **FastAPI**
- Enabled **admin-controlled dynamic form fields** and dropdown values, allowing real-time modifications for the mobile app interface
- Migrated from file server to Azure Blob Storage for images, reducing storage costs by approximately **20%** and data retrieval speed by **30%**
- Integrated **GIS mapping** capabilities with flexible line and area geometry for detailed real time plotting of feeder DTR networks
- Implemented the tool for **2 East Indian Electricity Transmission Companies**, covering approximately a asset base of **INR 30K crore**

Project Management Consulting Portal

- Developed a real-time tracking portal for Key Performance Indicators, implemented in **RDSS smart-metering** project in East India.
- Key features: user/role management, master data management, vendor management, project monitoring, reporting, IT/ERP integration
- Used **React, Chakra UI, TailwindCSS, and ApexCharts** for seamless integration and superior user experience on web and mobile.
- Currently implemented in **3 separate projects**, generating **INR 10 crore** annually and improving project delivery timelines by **15%**

Energy Consumption Management Tool

- Developed a **ML tool** for load forecasting in a South Indian utility, with **0.995 R2 score** and improving accuracy by **58%** from previous model
- Engineered and deployed 30+ ML models, leveraging cross-validation and hyperparameter tuning to select the best-forecasting model
- Integrated data sources from **SAP HANA** and deployed the solution on **SAP BTP**, demonstrating proficiency in enterprise-level hosting

Generalized Regression Forecasting Application

- Developed an application supporting any number of parameters, enabling annual data storage and intuitive user-friendly modification features
- Utilized Linear Regression, historical CAGR, and user-defined multistep CAGR methods for conducting comprehensive univariate analysis
- Provides detailed **P-values** and **R2 scores** for predictions, leveraging lasso feature selection to optimize key forecasting parameters
- Implemented the tool for a **South East Asian offshore utility**, achieving a **70%** reduction in forecasting and decision-making timeline

Internships

Fullstack Developer Intern | Talentz.AI

May 2022 – Nov 2022

- Developed and deployed a job portal, backend API and the corresponding admin dashboard following industrial security practices
- Created real time chat application and notification system using socket.io to facilitate bidirectional communication between server-client
- Built the backend in Node.js with **AWS DynamoDB** (form data) and **AWS S3** (file data) as database and using Redis as in-memory cache
- Deployed the code on AWS lightsail server with full integrated SSL certificate using **Nginx** web server as reverse proxy and load balancer
- Integrated CI/CD process using Docker, Jenkins and Kubernetes for automated testing and deployment of the latest code to live server

Web Developer Intern | Khoj Software

May 2022 – Nov 2022

- Created a mobile-responsive web platform for integrating multiple software technologies, scaling the user base to **15,000 users**
- Developed the frontend using Next.js with Server-Side Rendering, and the backend in Node.js/ GraphQL, both written in TypeScript
- Leveraged Dgraph for database efficiency and AWS S3 for scalable, low-latency file storage and cloud infrastructure

PILOT E-learning Platform | Prof. Kaushal Kumar Bhagat | Prof. Jingjing Zhang

Feb 2020 – Sep 2020

- Developed **real-time chat system** for commenting, reacting, and note-taking on video timestamps, enhancing engagement and interactivity
- Implemented interactive overlays with bar graphs on the video player to visualize user reactions, providing insightful feedback for instructors
- Designed and integrated a comprehensive feedback system, enabling users to share learning experiences and improve content quality

Technical Skills

Languages: Python, Java, TypeScript, C/C++, SQL, Kotlin, Go, JavaScript **Databases:** PostgreSQL, MongoDB **Tools:** Bash, Git/GitHub, SSH, Docker, Spark/DataBricks **Frameworks:** React, Django, FastAPI, Node.js, Ionic, React Native

Extracurricular Activities

Web Team Head — Spring Fest, IIT Kharagpur

- Developed **6 web applications** to fulfill numerous business logic like Fest Event Management, Gaming Platform, and many more
- Led a team of **20 developers** to develop and repurposed several websites visited by **12000+ users** and SEO optimized individual website
- Handled Linux server for the **deployment** of all websites registered under springfest.in domain and secured it using **SSL** certificate