

# SHRESTHA GUPTA

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## Summary

Backend-focused Software Engineer with 2+ years of experience designing scalable, cloud-native APIs, data-driven platforms, and AI-integrated services using Azure Functions, Flask, Node.js, and MongoDB/PostgreSQL. Skilled in REST API development, microservice architecture, CI/CD pipelines, and data modeling for real-time analytics and intelligent automation. Also experienced in building responsive, modular frontends with React.js and Redux to deliver seamless user interactions. Proven success in deploying full-stack solutions that optimize performance, reduce manual effort, and drive business outcomes. Passionate about clean backend architecture, data integrity, and scalable systems.

## Skills

- **Programming & Frameworks:**  
Python (Flask, Pandas, Scikit-learn), JavaScript (Node.js, Express, React.js), HTML, CSS, Power Fx
- **Backend & APIs:**  
Azure Functions, REST API Design, Flask Microservices, Express.js, OAuth2/JWT, API Gateway (APIM), Modular Architecture
- **Cloud & DevOps:**  
Azure Web Apps, Azure API Management, ARM Templates (IaC), Azure DevOps, CI/CD Pipelines, Serverless Deployment
- **Databases & Data Modeling:**  
MongoDB (NoSQL, document modeling), PostgreSQL, MySQL, Dataverse (RBAC, relational modeling), SQL Query Optimization
- **AI/ML Integration:**  
Gemini API, GPT-3.5, Scikit-learn (K-Means), Spotify API, Exploratory Data Analysis with Pandas, Seaborn, Matplotlib
- **Automation & BI:**  
Power Automate (workflow automation, approvals), Power BI (real-time dashboards, time tracking, recruitment insights)
- **Frontend:**  
React.js (Hooks, Context API), Redux, Responsive UI Design, Power Apps (Canvas), API Integration, UI Workflows

## Professional Experience

### Software Engineer

*Pursuit Software – Kolkata, India (Aug 2022 – Present)*

## Projects

### ◆ Fitness Intelligence API

*Feb 2025 – Present | Azure Functions, MongoDB, Gemini API, APIM, Azure DevOps | Self-Initiated*

- Built a cloud-native fitness coaching API demonstrating scalable serverless architecture and AI-powered personalization.
- Developed stateless REST APIs using Azure Functions with <500ms cold starts.
- Integrated Gemini API to generate adaptive fitness guidance for different user goals.
- Modeled flexible MongoDB schema for user logs and AI-generated content (~3,000+ entries).
- Exposed APIs via Azure APIM with rate-limiting, OAuth2, versioning, and public developer portal.
- Automated infrastructure deployment with ARM templates; CI/CD via Azure DevOps.

Impact: Delivered working AI-driven coaching engine within 2 weeks; improved release velocity by 70%.

#### ◆ Talent Pool Platform

Mar 2024 – Present | React.js, Node.js Microservices, PostgreSQL, Power BI | Pursuit Software

- Developed a modular recruitment intelligence tool used across 2 departments.
- Frontend: Built responsive UI with filters, candidate dashboards, and dynamic cards using React.js and Redux for global state management.
- Backend: Built 25+ REST endpoints with RBAC via Node.js microservices and Dataverse Web API.
- Database: Designed normalized PostgreSQL schema to support 1,500+ candidate records.
- Analytics: Created 4 real-time Power BI dashboards for hiring funnel, time-to-fill, and source performance.

Impact: Cut shortlisting time by 50%, reduced recruiter follow-ups by 60%, improved hiring forecast accuracy by 40%.

#### ◆ Timesheet Management System

Nov 2022 – Mar 2024 | Power Platform, Power Automate, Power BI | Pursuit Software

- Built an end-to-end time tracking and resource utilization platform used by 50+ employees.
- Designed a role-based canvas app in Power Apps to capture daily time logs.
- Automated reminders, approvals, and alerts using 6 Power Automate flows (~80 hrs/month saved).
- Modeled 6 core tables in Dataverse; managed over 20,000 records.
- Built 3 executive dashboards for utilization, absenteeism, and billability tracking.

Business Outcome: Improved billing accuracy and auditability, saving ~₹3.5L/year.

#### ◆ Music Recommendation System

Jul 2022 | Flask, Scikit-learn, MySQL, Spotify API | Master's Degree

- Academic capstone project building a hybrid recommender engine simulating Spotify discovery logic.
- Collected and analyzed 1,500+ songs using Spotify API.
- Applied K-Means clustering (~82% prediction accuracy) for genre/style classification.
- Built RESTful Flask APIs with MySQL backend; UI with HTML/CSS/JS and embedded Spotify links.

Result: Demonstrated real-time recommendations and playlist generation; achieved top project grade (CGPA: 9.96/10).

## Education

*Master of Science*

Maulana Abul Kalam Azad University of Technology

July 2022 | CGPA: 9.96/10

*Bachelors of Science in Computer Science (Hons.)*

University of Calcutta

July 2019