

# RAMNAGILAN

Python Developer

## CONTACT

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Coimbatore  
India - 641017

## EXPERIENCE

Russell Tobin – Software  
Developer  
Chennai | Sep 2024 - Present

Proglabs – Analyst  
Coimbatore | Dec 2021 - Sep  
2024

## SKILLS

- Python Programming
- Django Framework
- RESTful API Development
- LLM and RAG systems
- AI Model Integration
- MySQL, MSSQL
- Vector Databases
- React.js
- HTML, CSS, Bootstrap
- JavaScript
- Docker, Nginx
- Linux
- Git and GitHub

## TOOLS

- Visual Studio
- Postman
- Ngrok
- DBeaver
- MySQL Workbench

## EDUCATION

Graduated: 09/2020  
Bachelor's in Computer Science,  
Bishop Appasamy College  
of Arts and Science,  
Coimbatore.

## LANGUAGES

- English
- Tamil
- French

## PROFILE

Full Stack Developer with 4 years of experience specializing in Python, Django, React, and SQL. Skilled in building scalable web applications, integrating AI/ML models, and deploying end-to-end solutions using Docker and cloud services. Proficient in API development, frontend engineering, secure authentication (Azure AD & LDAP), and database management. Strong problem-solving abilities with a focus on delivering user-centric, high-performance applications.

## PROJECTS

### RAG-based Chatbot

Developed and deployed a Retrieval-Augmented Generation (RAG) chatbot using Django and React with Milvus for vector search, LDAP for access control, and MySQL Server for managing user interactions and query history. The system enables secure, document-aware conversational AI.

#### Roles and Responsibilities:

- Built end-to-end solution with React frontend and Django backend.
- Developed REST APIs for document management, query handling, and chat history.
- Integrated Milvus for similarity search and connected the pipeline with RAG LLM.
- Implemented LDAP-based authentication and permission control.
- Managed MySQL database for storing user data and interaction logs.

### BOM Verification System

Built an AI-powered BOM Verification System using React and Django, integrated with a video recognition model to detect components from assembly videos, verify them against the BOM, and generate PDF reports. All data and reports are stored in SQLite for historical tracking.

#### Roles and Responsibilities:

- Developed React frontend for video upload, result display, and PDF export.
- Built Django REST APIs for video processing, AI model invocation, and data storage.
- Integrated AI video detection for real-time component verification.
- Managed SQLite database for reports and user interaction logs.
- Automated PDF report generation for verification summaries.

### AI-based Project Smartness Evaluation System

Developed an AI based Project Evaluation Platform to calculate a project's smartness score using ChatGPT API. The system provides actionable insights to enhance project quality based on goals, KPIs, timelines, and obstacles. Built with React (frontend) and Django (backend), integrated with Azure Authentication, and deployed using Docker with MSSQL for data storage.

#### Roles and Responsibilities:

- Developed React frontend and Django REST APIs for project evaluation workflows.
- Integrated ChatGPT API for smartness scoring and improvement suggestions.
- Managed MSSQL database with complete CRUD operations for user data and reports.
- Implemented Azure Active Directory Authentication for secure access.
- Dockerized the application for cloud deployment and public access.
- Enabled export and reporting of evaluation results for tracking and analysis.