

Bidut Sharkar Shemanto

Software Engineer — Backend Systems & AI Integration

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Summary — Backend-focused Full-Stack Developer with experience in Express.js, Django, and React.js. Skilled in building and deploying end-to-end web applications with clean APIs, responsive UIs, and cloud deployment using AWS, Docker, and GitHub Actions.

Education and Certifications

Khulna University of Engineering and Technology (KUET)

B.Sc. Eng. in Energy Science and Engineering

2020 – 2025

Certifications

- Data Science Certifications (from Ostad Platform) - Python, Machine Learning, Data Analysis, SQL
- Web Development (from Programming Hero Platform) - HTML, CSS, JavaScript, React.js, Express.js, MongoDB
- 90-Hour Machine Learning with Python Training (from ICT Division under EDGE Program at KUET)

Skills and Tools

Languages: Python, JavaScript/TypeScript

Frontend: React.js, HTML, CSS, Tailwind CSS

Backend: Django REST Framework, Express.js, Node.js, Redis, Celery, Websocket, RabbitMQ, Kafka, Elasticsearch

Databases PostgreSQL, MongoDB, Vector Databases(ChromaDB, Pinecones), Drizzle ORM, Mongoose

Machine Learning & AI: Pandas, NumPy, Scikit-learn, PyTorch, LangChain, Vector Databases, RAG, MCP

DevOps & Cloud: Git, AWS, Linux(Ubuntu), Nginx, Docker, CI/CD(Github Action), Terraform, Ansible, Grafana, Prometheus, Kubernetes

Experience

Python Developer |Sparktech Agency

Full Time

Aug 2025 – Present(6 Months)

- worked in AI team as Backend Developer, created API for both Web and Mobile App (Flutter), integrated AI
- worked in 4+ projects, handled International clients, helped my team leader to manage day-to-day team management works- requirements check, communicated with sales team to acquire new clients, budget negotiation, quotation making

Projects

Full Stack University Management System Using PERN Stack (*Personal Project)

PostgreSQL, Express.js, React.js, Node.js, Docker, TypeScript, Drizzle ORM, Tailwind CSS

•Project Link ↗

- Developed a production-grade full-stack classroom management dashboard featuring multi-role authentication, real-time analytics, and dynamic class enrollment with secure join codes
- integrated Cloudinary for AI-powered asset management and CDN delivery, and deployed advanced monitoring with Site24x7 for performance insights

MenuSideKick - AI powered Flutter App for Scanning Restaurant Menu (*Company Project)

Django REST Framework, Flutter Mobile App, AWS RDS, AWS Textract OCR, AI ChatBot(OpenAI) Docker, AWS, GitHub Actions

- Collaborated closely with the Flutter team and AI team to build an AI-powered restaurant menu-scanning app, ensuring smooth communication between mobile, backend, and AI components.
- Integrated the AI team's OCR and chatbot modules into the Django backend, enabling automated menu extraction and conversational food-recommendation features.
- Containerized the backend using Docker and deployed it with Nginx on AWS EC2; implemented CI/CD pipelines with GitHub Actions for automated builds and deployments.

Mon5Monjeur - NBR Fantacy Game (*Company Project)

Django REST Framework, Redis, Websocket, Flutter App, React.js

- Worked closely with the Flutter team to build a real-time fantasy gaming app backend, collaborating on gameplay flow, scoring logic, and API contracts.
- Implemented complex game mechanics and leaderboard logic in Django REST Framework, integrating external sports APIs to deliver live player and match data.
- Built WebSocket-based real-time communication for live matches, pagination, enabling instant score updates and in-game interactions between users.

GamePrice AI - AI Game Box Cover Analysis to Give Price (*Company Project)

Next.js, Django, Docker, External API Integration, AI Integration

- Integrated the AI team's model into the backend to analyze game box cover images and estimate game prices using data pulled from the PriceCharting external API.
- Developed and maintained Django-based REST APIs to handle image uploads, AI inference requests, and real-time price lookup workflows.
- Assisted the frontend developer in Dockerizing the Next.js application and resolving deployment issues, ensuring the full-stack system could be deployed smoothly on AWS.

ScholarPage — Full-Stack Academic Portfolio Builder (*Personal Project)

• [Project Link](#)

React.js, Django REST, PostgreSQL (Neon), JWT Auth, TailwindCSS, Docker, AWS, GitHub Actions

- Built a full-stack web application that enables researchers to create interactive academic portfolios, including education, publications, and research interests.
- Developed secure REST APIs using Django and PostgreSQL; built a responsive frontend with React.js and Tailwind CSS.
- Deployed on AWS EC2 using Docker; implemented JWT authentication and set up CI/CD with GitHub Actions.
- Configured Nginx and Gunicorn to serve the backend in a production-ready setup on Ubuntu-based EC2 instances.

PeoplesList — Member Directory Platform for Groups and Communities (*Personal Project)

• [Project Link](#)

Django REST Framework, PostgreSQL, React.js, Docker, AWS EC2, Nginx

- Built a tool for managing member directories across groups (e.g., alumni, clubs) without requiring member sign-ups, Combining Google Form + Sheet in single page
- Used just one link to add and view members, common password, and moderation options.
- Utilized DRF and PostgreSQL for scalable API backend; deployed via Docker on AWS EC2 with Nginx.

Achievements

- Champion in Inter-University Innovation Idea and Project Competition-2022 (*Issued by FabLab KUET, Dec 2022*)
- 3rd Place in All Bangladesh Asteroid Search Campaign (*Issued by NASA, Oct 2019*)
- Finalist in Nuclear Dilemma 6 (*Issued by Information Center on Nuclear Energy, Apr 2023*)
- Finalist in AGRIBIZ, Agriculture-Based Inter-University Business Case Competition (*Issued by Sher-e-Bangla Agriculture University, Jan 2023*)
- 4th Place in IEOM Society KUET Student Chapter's Innovative Idea Contest (*Issued by IEOM Society KUET Student Chapter, Jul 2022*)
- 1st Runner-Up in BizBash 2.0 (*Issued by KUET Career Club-KCC*)

Extracurricular Activities

KUET Business and Entrepreneurship Club

Mar 2022 – Sep 2023

Senior Executive: Public Relations (PR) and Graphics Design

- Organized TEDx KUET as part of the graphics and content team.
- Conducted the CASE CRACK WORKSHOP 2022 as a Junior Executive.
- Organized and managed the HULT Prize at KUET; conducted workshops on presentation skills, creating PowerPoint slides, and business idea showcasing.

KRIoTIC (KUET Robotics and IoT Innovation Club)

May 2022 – Mar 2023

General Member

- Organized and conducted workshops on IoT and microcontrollers.
- Delivered a speech on IoT at Khulna University to 200+ people, raising awareness about IoT and frontier technologies.