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)   **2020 – 2025**
B.Sc. Eng. in Energy Science and Engineering

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, Go
Frontend: React.js, HTML, CSS, Tailwind CSS
Backend: Django, Node.js, Express.js, Drizzle ORM, Redis, Celery, Websocket, PostgreSQL, MongoDB
Machine Learning & AI: Pandas, NumPy, Scikit-learn, PyTorch, LangChain, Vector Databases
DevOps & Cloud: Git, AWS, Linux (Ubuntu), Nginx, Docker, CI/CD (Github Action)

Experience

Sparktech Agency   **Aug 2025 – Present**
Python Developer

– **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

Bigganpur Technologies   **Apr 2022 – Nov 2023**
Co-founder (self-employed)

– Sold electronics components (microcontrollers, sensors, actuators, etc.) to university students, **generated 3+ lakh revenue** in 2 years.
– Conducted **15+ paid workshops** on electronics and programming in the KUET area.
– **Supplied lab equipment** to KUET's FABLAB under the ECE department.

Projects

Full Stack University Management System Using PERN Stack *(*Personal Project)*   •Project Link ↗
PostgreSQL, Express.js, React.js, Node.js, Docker, TypeScript, Drizzle ORM, Tailwind CSS

– 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)*   •Project Link ↗
Flutter Mobile App, Django REST, 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)*   •Project Link ↗
Flutter App, React.js, Django REST Framework, Websocket

– Worked closely with the Flutter team to build a real-time fantasy gaming app, 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, enabling instant score updates and in-game interactions between users.

GamePrice AI - AI Game Box Cover Analysis to Give Price *(*Company Project)* •Project Link ↗
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.