MD NAHIDUZZAMAN DIPU

Junior Python Developer | Django | FastAPI | REST APIs | Full-Stack Web Development

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PROFESSIONAL SUMMARY

Junior Python Developer who developed and deployed a live Point of Sale (POS) system during a Django internship at O'dell Tech Ltd.: 16 data models, MySQL, role-based access for four user roles and 281 automated tests. Builds backend services and REST APIs with Django, FastAPI, Flask and Express.js, and full-stack applications with React, MongoDB and Socket.IO. Brings applied machine learning to product work, including real-time YOLO computer vision services integrated into web platforms. B.Sc. in Computer Science and Engineering from Green University of Bangladesh.

TECHNICAL SKILLS

Programming: Python, JavaScript, SQL, HTML, CSS

Backend: Django, Django ORM, FastAPI, Flask, Node.js, Express.js, REST APIs, WebSockets (Socket.IO), Multithreading

Frontend: Django Templates, React, Vite, Tailwind CSS, JavaScript, Responsive Web Design

Databases: MySQL, SQLite, MongoDB (Mongoose), Relational Data Modelling

Security: Role-Based Access Control, Session and JWT Authentication, bcrypt, Rate Limiting, Helmet

Testing and Deployment: Django Test Framework (281 tests), cPanel, Passenger (WSGI), WhiteNoise, Environment Configuration (.env), Docker (basic)

AI / ML: PyTorch, TensorFlow, Scikit-learn, YOLO (Ultralytics), OpenCV, NumPy, Pandas

Tools: Git, GitHub, openpyxl (Excel), CSV Import/Export

PROFESSIONAL EXPERIENCE

Python Developer Intern (Django) – O'dell Tech Ltd. Aug 2026 – Sep 2026

Point of Sale (POS) System – O'dell Tech Shopping (internship project)

Live: pos.odelltech.com | github.com/NahiduzzamanDipu/pos_system_odelltech

Tech: Python, Django 4.0, MySQL 8, Django ORM, HTML/CSS, JavaScript, openpyxl, WhiteNoise, cPanel (Passenger WSGI)

- Developed and deployed a production Point of Sale system from a business requirement specification, covering the full counter workflow: product search, cart, discounts, tax, payment, invoice and stock update.
- Designed 16 Django data models and a service layer for stock, sales, returns, purchases and pricing, including a stock-movement ledger, low- and out-of-stock alerts, and supplier purchase receipts that update inventory.
- Built a sales terminal with barcode/SKU scanning, cart editing, returning-customer detection and a fixed pricing order (product discount, customer discount, tax), recording cash, card, mobile and bank payments with change calculation and printable receipts.
- Implemented role-based access control for four roles (Administrator, Manager, Cashier, Inventory Staff) through a single capability map that guards views and builds navigation, with session authentication and login lockout after repeated failed attempts.
- Delivered six business reports (daily, monthly, yearly, customer, inventory, product performance) using database-side aggregation, CSV export and SVG charts, plus bulk product import from CSV and Excel with preview and error reporting.
- Wrote 281 automated tests passing on both SQLite and MySQL, and deployed the application to cPanel using Passenger (WSGI) and WhiteNoise for static files.
- Built a Task Management System in Django and MySQL with task creation, editing, deletion and commenting through a responsive web interface.

TECHNICAL PROJECTS

TurfBari – Full-Stack Turf Booking & Management SaaS Platform

Founder & Main Developer | turfbari.onrender.com | github.com/NahiduzzamanDipu/turfbari

Tech: React, Vite, Tailwind CSS, Node.js, Express.js, MongoDB, Mongoose, REST API

- Developed a multi-tenant SaaS platform for online turf discovery, availability checking, and sports facility bookings.
- Built role-based dashboards for turf owners and managers to manage bookings, customers, revenue, expenses, pricing, and subscriptions.

- Implemented secure authentication, role-based access control, and isolated business data management.
- Integrated customer management with Excel export, SMS notifications, and subscription-based pricing.
- Developed interactive demo booking and demo owner dashboards for prospective customers.
- Implemented bilingual support (Bengali and English) with responsive interfaces for desktop and mobile.

CitizenCare – Full-Stack Public Safety Platform

Team Project | Main Developer | github.com/NahiduzzamanDipu/CitizenCare

Tech: React, Vite, Tailwind CSS, Node.js, Express.js, MongoDB, Socket.IO, Python, Flask, YOLOv8

- Led development of a platform where citizens report crimes with photo or video evidence and a map location, and police verify reports and respond to SOS alerts from a live command centre.
- Built a REST API with Express.js and MongoDB (Mongoose) and real-time SOS, camera-feed and alert channels with Socket.IO, verifying JWTs on every socket handshake.
- Implemented three role-based portals (citizen, police, admin): police signup gated by station registration codes, admin moderation, and an append-only audit log of privileged actions.
- Hardened the API with bcrypt hashing, rate limiting, Helmet headers, a CORS allow-list and upload validation (MIME allow-list, 25 MB cap).
- Connected a Python Flask microservice running YOLOv8 that analyses CCTV frames and returns weapon-detection results to the API.

PothPradarshak – Real-Time Navigation Assistant for Visually Impaired People

B.Sc. Thesis Project | Main Developer (team of students) | github.com/NahiduzzamanDipu/PothPradarshak

Tech: Python, FastAPI, PyTorch, Ultralytics YOLO11, OpenCV, edge-tts, pyttsx3

- Built a Python backend with FastAPI that streams annotated video (MJPEG), exposes a JSON state API and lets users change detection, voice and language settings at runtime.
- Designed a three-thread pipeline (camera capture, detection, speech synthesis) so voice output never blocks inference and inference never blocks HTTP requests; runs at about 25 FPS.
- Trained a custom YOLO11n model on a 2,782-image street dataset and generated spoken guidance in Bengali and English.

EDUCATION

Bachelor of Science in Computer Science and Engineering (CSE) 2022 – 2026

Green University of Bangladesh, Dhaka

Thesis: Object Detection and Navigation Assistance for Visually Impaired Individuals (PothPradarshak). Medium of instruction: English.

Higher Secondary Certificate (HSC), Science 2019 – 2021

Maijdee City College, Noakhali

Secondary School Certificate (SSC), Science 2018 – 2019

Harinarayanpur Union High School, Noakhali

CERTIFICATIONS AND TRAINING

Python Machine Learning (Certificate) – Creative IT Institute 2025 – 2026

Data preprocessing, supervised and unsupervised learning, model training and evaluation in Python.

ADDITIONAL INFORMATION

Competitions: Hult Prize, Campus Finalist (Green University of Bangladesh) with AgriFarm, an agriculture-focused solution for farmers

Activities: Member, Green University Computer Club (GUCC): technical workshops, seminars and event organisation

Other Experience: Customer Service and Communication Officer, Grameenphone; Founder, Jersportss (custom-coded sportswear e-commerce platform, in development)

Languages: Bengali (Native), English (Professional), Hindi, Urdu, German