Pranta Chakraborty

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PROFESSIONAL SUMMARY

Highly accomplished Software Engineer with 5 years of experience specializing in Python and the Django/Django REST framework to build scalable backend infrastructure. Proven leader in developing real-time IoT and microservice platforms, adept at end-to-end deployment and optimizing CI/CD pipelines (reducing times from 4 minutes to 40 seconds). Interested in contributing to a collaborative and forward-thinking environment, leveraging strong problem-solving skills and a passion for new technologies.

SKILLS

Programming Languages: Python, JavaScript

Backend Frameworks: Django, Django REST Framework, FastAPI

Databases: PostgreSQL

Cloud Platforms: AWS (EC2, S3, Lightsail, Rout53, Cloudfront, Parameter Store)

DevOps & CI/CD: Git, Docker, Jenkins, OpenTelemetry, Grafana, Prometheus

Messaging/Caching: Celery, Redis, MQTT

WORK EXPERIENCE

Zicore Technologies   Dhaka, Bangladesh
Software Engineer   *February 2023 – Present, Full-time*

- Led a 2-person backend team in the design and development of the backend infrastructure for **Satarko**, a real-time IoT-based intruder detection and monitoring platform using Python and Django REST Framework.
- Spearheaded seamless collaboration with mobile, front-end, and hardware/firmware teams, ensuring cohesive integration of complex system components.
- Applied real-time communication capabilities using WebSockets for instantaneous updates across web and mobile applications, enhancing user experience for critical security alerts.
- Integrated Firebase for push notifications, significantly improving user engagement and alert delivery.
- Utilized Celery for asynchronous task processing and Redis for both message brokering and caching, significantly enhancing system responsiveness and efficiency.
- Drove the entire deployment lifecycle, from build automation to release, ensuring smooth and efficient delivery of the platform.
- Designed and applied robust Jenkins pipelines for automated build, testing, and deployment (CI/CD), streamlining the release cycle.
- Optimized CI/CD pipelines, reducing build and deployment times from 4 minutes to 40 seconds, significantly enhancing development velocity and release frequency.
- Established and controlled monitoring infrastructure using Grafana and Prometheus to track system performance and identify potential issues proactively.
- Played a key role in designing the system's scalable, secure, and performant architecture, catering to diverse IoT devices and real-time data streams.
- **Technologies**: Python, Django, Django Rest Framework, AWS (EC2, S3, Lightsail, Route53, Cloudfront), Celery, Celery-Beat, Redis, Web-Sockets, Jenkins (CI/CD), MQTT, PostgreSQL

Codesmith Tech Ltd.   Dhaka, Bangladesh
Software Engineer   *March 2022 – January 2023*

- Spearheaded the design and infrastructure for **Byduy**, a multi-vendor platform (microservice architecture); implemented API integrations and optimized database queries, resulting in 20

  faster load times for vendor dashboards.
- Developed and executed a real-time chat service for regional admins and vendors using WebSockets, significantly enhancing communication efficiency and responsiveness.
- Employed the Saga pattern to ensure data consistency across distributed microservices, addressing complex transactional requirements

- Facilitated robust service-to-service communication through both event-based and HTTP-based protocols within the microservice ecosystem.
- Managed the deployment of backend applications on AWS (Lightsail) and frontend assets on AWS (S3), integrating with Cloudflare CDN for improved performance and reliability.
- **Technologies**: Python, Django, Django Rest Framework, AWS (EC2, S3, Lightsail), Celery, Celery-Beat, Redis, Web-Sockets, PostgreSQL

Codesmith Tech Ltd. Dhaka, Bangladesh

Junior Software Engineer *March 2021 – March 2022*

- Contributed as a backend developer for **WeCorporates**, a corporate social platform for Bangladesh, which plays a key role in feature development.
- Implemented a secure email-based authentication system alongside social authentication methods, enhancing user accessibility and security.
- Developed and integrated real-time notification and chat services within the page-rendered application to boost user engagement and communication.
- Developed a Content Management System (CMS) for an existing e-commerce platform, streamlining content updates and operational efficiency.   .
- **Technologies**: Django, Django Channels, Celery, Celery Beat, JavaScript, Ajax, PostgreSQL, Git, Redis.

EDUCATION

Bangladesh University of Business & Technology Dhaka, Bangladesh

B.Sc. in Computer Science & Engineering *October 2016 – October 2020*

CGPA: 3.78/4.00