Shaunak Pedgaonkar

Dublin, Ireland | +353 0894948113 | shaunak.pedgaonkar@gmail.com | linkedin.com/in/shaunakpedgaonkar
| github.com/Shaunakpedgaonkar

SUMMARY

Results-driven MSc Computer Science graduate from Trinity College Dublin with a strong foundation in distributed systems, backend engineering, and ML/NLP. Proven ability to design scalable cloud architectures and deliver fault-tolerant systems under production constraints. Passionate about performance, system design, and AI.

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript, SQL
Frameworks: Flask, Django, Node.js, React   **Cloud/Tools:** AWS (EC2, RDS, S3, Route 53), Docker, Git, JMeter
Creative/Frontend Tools: Three.js, Blender, WebGL, Anime.js, AOS, GSAP, React Three Fiber, Vite **Concepts:** Distributed Systems, System Design, REST APIs, JWT, Async I/O, NLP, CI/CD

PROJECTS

Global Loyalty Card System · May–Jun 2024
Python, Flask, MySQL, Docker, AWS, OpenTelemetry, JMeter

- Designed a globally distributed loyalty platform across 3 AWS regions with real-time cross-region consistency via MySQL Multi-Master Replication.
- Developed JWT-secured Flask APIs with less than 5s failover using Docker, Route 53 and ELB for continuous availability.
- Achieved 99.9% uptime; stress-tested with 10K+ concurrent users; integrated OpenTelemetry and Signoz for real-time observability.

City Disaster Response System · 2024
Django, React, AWS Glue, Step Functions, Google Maps API, NLP

- Built a real-time disaster navigation platform that reroutes vehicles based on live traffic, weather, and hazard data.
- Achieved less than 3s latency from event detection to map update using AWS Glue and Step Functions.
- Integrated Google Maps with Amazon Location overlays and an NLP chatbot (92% intent accuracy); supported 5K+ concurrent users.

Lucene Search Engine · 2024
Java, Apache Lucene, BM25, Vector Space Model

- Developed a document search engine over 1,400 aerospace documents with custom analyzers and Lucene's BM25/VSM ranking.
- Achieved MAP of 0.90 and Recall of 0.96 on TREC-style queries; reduced memory usage by 22% through tokenizer optimization.

Machine Translation Evaluation (Thesis) · Aug 2024
Python, MarianMT, Transformers, BLEU, CHRF, BERTScore

- Benchmarked 4 MT models on 700K+ bilingual sentence pairs (EN–FR, BG–EN); MarianMT scored CHRF 63.7 (+12% gain).
- Identified metric limitations for morphologically rich languages; improved BLEU by +8.3 with model + tokenizer tuning.
- Proposed hybrid metric framework; improved BERTScore alignment with human eval by +0.18 Pearson correlation.

EXPERIENCE

Software Intern — AMS BuildTech Pvt Ltd · May–Aug 2021

- Developed internal tools for project scheduling and cost estimation, reducing budgeting cycle time by **15%**.
- Built real-time dashboards using Excel and Python, improving stakeholder reporting by **20%**.
- Collaborated with engineers and managers in planning, budgeting, and execution across multiple teams.
- Collaborating with team members to prepare project reports, progress updates, and documentation

EDUCATION

Trinity College Dublin, Ireland · 2023–2024
MSc in Computer Science