# Shaunak Pedgaonkar

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#### **SUMMARY**

Computer Science postgraduate from Trinity College Dublin with hands-on experience in building full-stack web apps, scalable backend systems, and interactive UIs. Skilled in JavaScript (React, TypeScript), REST/GraphQL APIs, cloud-native development, and agile delivery. Passionate about product-driven engineering, accessibility, and shipping software users love.

# TECHNICAL SKILLS

Languages: JavaScript (TypeScript), Python, Java, C++, SQL, HTML/CSS

Frameworks: React, Flask, Django, Node.js

Cloud/Tools: AWS (EC2, S3, RDS, IAM, Route 53), Docker, GitHub Actions, JMeter Frontend/Creative: React, Tailwind, Storybook, WebGL, Three.js, GSAP, AOS, Blender

Concepts: REST/GraphQL APIs, OOP, CI/CD, E2E Testing, System Design, Async I/O, Accessibility, Localization, Agile

# **EXPERIENCE**

Software Intern — AMS BuildTech Pvt Ltd

May-Aug 2021

- Built dynamic estimation tools using Excel + Python, reducing project scheduling time by 15%.
- Delivered interactive dashboards to track construction KPIs, improving reporting efficiency by 20%.
- Automated resource allocation across projects using structured cost and schedule models.
- Collaborated with product, design, and engineering teams to define and deliver user-centered features on schedule.

#### **PROJECTS**

## Global Loyalty Card System

Python, Flask, MySQL, Docker, AWS, OpenTelemetry, JMeter

May-Jun 2024

- Architected a global loyalty platform across 3 AWS regions with real-time MySQL Multi-Master Replication.
- Secured APIs with JWT and designed <5s failover using Docker, ELB, and Route 53; sustained 99.9% uptime.
- Load-tested 10K+ users with JMeter; monitored app-level latency with OpenTelemetry + Signoz.

#### City Disaster Response System

Django, React, AWS Glue, Step Functions, Google Maps API, NLP

2024

- Orchestrated a real-time routing app that reroutes vehicles during disasters using live traffic and hazard feeds.
- Achieved sub-3s latency using AWS Glue + Step Functions; supported 1K+ concurrent sessions.
- Integrated Google Maps and a chatbot (92% intent accuracy) to guide users to safer routes.

#### Lucene Search Engine

2024

Java, Apache Lucene, BM25, Vector Space Model

- Designed an IR engine indexing 1,400 aerospace docs using BM25 and VSM for ranked retrieval.
- Boosted MAP to **0.90**, Recall to **0.96** via custom tokenizers and memory-efficient analyzers.
- Reduced memory footprint by 22%; tuned precision for noisy queries in long-form datasets.

# Machine Translation Evaluation (Thesis)

Aug 2024

Python, MarianMT, Transformers, BLEU, CHRF, BERTScore

- Benchmarked 4 MT models on **700K**+ EN-FR and BG-EN pairs; MarianMT scored CHRF **63.7** (+12%).
- Tuned tokenizers and architectures to improve BLEU by +8.3; exposed limitations in standard metrics.
- $\bullet$  Proposed a hybrid scoring framework that raised BERTScore's alignment to human judgment by +0.18.

#### **EDUCATION**

# Trinity College Dublin, Ireland

2023-2024

Postgraduate Diploma in Computer Science (Level 9 – Master's Equivalent)

## RELEVANT COURSEWORK

Advanced Software Engineering, Distributed Systems, Machine Learning, AI, Scalable Computing, Text Analytics, Internet of Things, Security & Privacy, Research Methods, Urban Computing