

Tushar Kendre

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Summary

Senior Software Engineer (SDE II) with 5+ years of experience designing scalable backend systems, rule engines, and cloud-native platforms on AWS. Proven track record owning multi-tenant production systems, leading cross-functional initiatives, and delivering ML-driven document processing pipelines at scale. Strong in system design, distributed services, and infrastructure automation.

Work Experience

Software Development Engineer II, Patient First.AI – Boston, MA Jan 2025 – Present

- Architected and led development of a **multi-tenant vaccination compliance platform** serving **10+ universities** and **50,000+ student records**
- Designed a configurable **rules engine** supporting **100+ compliance policies** with dynamic evaluation workflows
- Designed scalable Fastify APIs and optimized PostgreSQL schemas for high-volume document ingestion and review
- Implemented **OCR + ML-driven document parsing pipeline** achieving **>95% structured extraction accuracy**
- Built **CI/CD and IaC** with GitHub Actions and Terraform; deployed to **AWS ECS/Lambda** with **>99.9% uptime**

Desktop Support Assistant, College of Engineering, Boston University, Boston, MA July 2024 – Dec 2024

- Designed and deployed a **lab access control system** using Golang, PHP, and MariaDB across **10+ engineering labs**
- Integrated real-time authentication and hardware triggers, improving policy enforcement and reducing unauthorized access
- Owned end-to-end deployment and operational support for campus-wide lab access workflows

Software Development Engineer, Brainwave Science Inc., Boston, MA Oct 2020 – Dec 2023

- Led development of distributed **EEG-based ML systems** using FastAPI, Airflow, Snowflake, and AWS SageMaker
- Optimized real-time inference pipelines, reducing latency by **70%** and hardware footprint by **60%**
- Designed containerized microservices deployed via **Docker, Kubernetes, and AWS EC2**
- Managed and mentored a team of **10 engineers**; delivered production AI systems to **NIA (India)** and **Dubai Police**

Education

Boston University, MS in Computer Science Jan 2024 – May 2025

- **Coursework:** Analysis of Algorithms, Computer Architecture, Operating Systems, Software Engineering, Computer Networks

Indian Institute of Technology (IIT) Kanpur, B.Tech. in Aerospace Engineering July 2016 – Oct 2020

- **Coursework:** Data Structures and Algorithms, Neural Networks, Autonomous Navigation, Image Processing

Publications

Comparative Performance Analysis of Scalp EEG and Ear EEG based P300 Ambulatory Brain-Computer Interfaces using Riemannian Geometry and Convolutional Neural Network July 2020

Vartika Gupta, *Tushar P. Kendre*, Tharun Kumar Reddy, Vipul Arora
10.1109/NCC55593.2022.9806815

Projects

rcube-js: In-Browser Rubik's Cube Simulator 

- Designed scalable NxN cube state modeling and 3D transformation engine with GPU-accelerated rendering
- Tools: **React, Three.js, WebGL**

Resume Analyzer: AI-powered Resume Review Tool 

- Built NLP-driven resume analysis platform for entity extraction, topic modeling, and skill gap visualization
- Tools: **Fastify, React, SpaCy, LDA**

Online SSVEP-Based Robot Controller Using Adaptive Riemannian Geometry *BCI Meeting 2021*

- Developed real-time SSVEP-based BCI system using adaptive Riemannian geometry for autonomous robot control
- Achieved **99.1% accuracy** on live EEG data and received a student award at the **BCI Meeting 2021**

Skills & Technologies

Languages: Python, JavaScript/TypeScript, Golang, C++

Backend & Systems: Node.js (Fastify), FastAPI, PostgreSQL, Distributed Systems, REST APIs

Cloud & DevOps: AWS (ECS, Lambda, EC2, SageMaker), Terraform, Docker, Kubernetes, GitHub Actions, Airflow

ML & Data: PyTorch, TensorFlow, HuggingFace, NLP, Snowflake