

Nandan Bharatkumar Parikh

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EDUCATION

Georgia Institute of Technology

Atlanta, GA

Master of Science in Computer Science (ML Specialization)

August 2025 – May 2027

- Relevant Coursework: Computer Vision, Machine Learning, Efficient ML | Graduate Student Researcher at the Bio-MIB Lab working on explainable vision models

Birla Institute of Technology and Science, Pilani

Pilani, India

Bachelor of Engineering in Computer Science

August 2019 – May 2023

- GPA: 8.8/10, Major GPA: 9.48/10 (Top 10% of the graduating batch)
- Coursework: Deep Learning, Image Processing, Applied Stat. Methods, TA for Neural Nets and Fuzzy Logic
- Activities and Societies: ACM BITS Pilani Chapter, Coding Club

EXPERIENCE

Software Engineer II (SDE-2)

July 2023 – July 2025

Flipkart (Hotels Search)

Bengaluru, India

- Integrated LLM-powered natural language search via LangChain4j and Elasticsearch on GCP to enable natural language queries scaled for 5k+ of concurrent users
- Architected and scaled Java/Spring Boot microservices to handle 5x traffic growth (5k → 24k RPS) via performance tuning, load testing, threadpool, and JVM optimization
- Designed RESTful APIs for hotel search, achieving 50% latency reduction (2s → 900ms p95) with multi-tier caching using Redis and Aerospike, reducing DB load by 70%
- Reduced zero search results by 35% by building a click-tracking pipeline for autosuggest optimization and enabling support for informally-defined geographic areas.
- Reduced staleness by 18% through cache warming with Quartz scheduler and MySQL-based job management

Research Intern | [Publication]

November 2022 – June 2023

Harvard University

Boston, MA

- Built end-to-end microscopy image deblurring pipeline with OpenCV, PyTorch, and CUDA to increase throughput
- Achieved 20x inference speedup over SOTA methods while maintaining quality (PSNR: 33.23 dB, SSIM: 0.8837)
- Work accepted for poster presentation at Microscopy and Microanalysis conference

Software Engineering Intern

June 2022 – August 2022

Flipkart

Bengaluru, India

- Developed Python automation framework integrating MobSF for mobile security testing at scale
- Developed self-service web portal with Google Apps Script reducing manual security audits by 60%

Project Intern

June 2021 – August 2021

Prodapt

Chennai, India

- Built RASA chatbot for company policy FAQs with automated ticket-raising, cutting support workload by 30%
- Validated employee emails via Python scripts linked to MySQL database

PROJECTS

LLM Quantization for Efficient Inference | *PyTorch, OPT-125M*

GitHub

- Implemented multi-bit post-training quantization with multiple schemes and granularities for model compression
- Achieved 4x memory reduction and 10% perplexity improvement using quantization-aware training over PTQ

SONAR to Satellite Image Translation | *PyTorch, OpenCV*

GitHub

- Developed Pix2Pix image translation model with custom enhancement module and edge-guided loss
- Implemented multiscale discriminator to reduce artifacts and improve translation quality
- Improved FID by 1.1% (71.584 → 70.815) and PSNR by 3.4% (31.76 → 32.85)

Compiler for Custom Programming Language | *C*

GitHub

- Built full compiler in C with lexical analysis, parsing, AST generation, semantic analysis, and code generation
- Achieved 6th rank out of 80 teams in university competition through modular architecture design

TECHNICAL SKILLS

Languages: Java, Python, C++, C, SQL, JavaScript

Backend & Architecture: Spring Boot, Microservices, RESTful APIs, Event-Driven Architecture, Multithreading

Data & Messaging: Kafka, Redis, Aerospike, Elasticsearch, MongoDB, JDBC, SQL

Cloud & DevOps: GCP, Docker, Kubernetes, CI/CD, Git

AWARDS & HONORS

Qualified for Indian National Mathematical Olympiad (INMO), 2018

Ranked 6th out of 80 teams in Compiler Construction Competition, BITS Pilani, 2022

Promoted early from SDE-I to SDE-II at Flipkart for exceptional backend contributions, 2024