Muhammad Moiz

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EDUCATION

Dartmouth College — B.S. Computer Science & Engineering, GPA: 3.7, Expected 2027
Honors: *Faculty Citation* (top 1% performance in CS 52: Full Stack Development)

WORK EXPERIENCE

Undergraduate Researcher | NLP & Social Dynamics Lab – Dartmouth College | Hanover, NH   Sep 2025 – Present
● Researched transformer models for sentiment analysis and similarity by designing optimized fine-tuning pipelines.
● Built preprocessing and evaluation workflows in Python (Hugging Face, spaCy), streamlining statistical analysis.
● Contributed insights on neural text generation and cognitive bias to lab reports and publications.

Software Developer | DALI Lab, Dartmouth College |Hanover, NH   Sep 2025 – Present
● Engineered scalable autograder powering a Coursera full-stack course, automating thousands of assessments.
● Improved reliability and feedback precision by integrating CI pipelines into the evaluation system.

Software Engineering Intern |Muff LTD – apparel e-commerce | Manchester, UK   Jun – Aug 2023 & 2025
● Increased conversions 22% for 50K+ users by deploying an on-device ML recommendation engine.
● Cut checkout latency 40% by re-architecting the system into cloud microservices capable of peak-load scaling.
● Launched real-time BI dashboards for sales and inventory, enabling data-driven decision-making across teams.
● Automated catalog workflows, reducing manual effort by 15+ hours per week and improving stock accuracy 30%.

Teaching Assistant (CS59: Programming Fundamentals) | Dartmouth College |Hanover, NH   Jun 2025 – Aug 2025
● Supported 100+ students in Python and data structures through labs and debugging guidance, raising pass rate 15%.
● Instilled coding standards and test-driven development practices to improve course code quality.

Research Assistant | Evergreen.AI Research Group |Hanover, NH   Mar 2024 – Jun 2025
● Adapted LLMs for mental health with LoRA and instruction tuning, raising empathetic response accuracy 28%.
● Built evaluation metrics for therapeutic dialogue; co-authored NeurIPS Undergrad Workshop preprint.

Software Developer | Rauner Special Collections |Hanover, NH   Sep 2024 – May 2025
● Deployed searchable cloud archive for 300K+ manuscripts, enabling global researcher access.
● Integrated Elasticsearch with embeddings, improving retrieval speed and relevance 3×.
● Implemented Dartmouth SSO (OAuth2.0) with role-based permissions to secure access.

PROJECTS

Dispatch (NestJS, PostgreSQL RLS, AWS)
● Built multi-tenant SaaS for e-commerce returns/logistics with rule-based workflows and carrier APIs.
● Designed event-driven architecture (AWS SQS, DLQs, retries) achieving 99.9% uptime and strong data isolation.

ManToGo (React, Node.js, Mapbox)
● Launched campus delivery platform with secure WebSocket chat, payments, and routing.
● Scaled to 450+ users in 6 weeks, integrating Dining & Payroll systems to support student jobs.

Tiny Search Engine (C, Systems Design)
● Built crawler, indexer, and query engine for 15K+ pages with efficient memory and I/O management.
● Optimized tokenization and thread pooling, reducing query latency from 30s → 0.8s.

SKILLS

Python, Java, JavaScript/TypeScript, C/C++ | React, Node.js, Flask | AWS (Lambda, S3, DynamoDB), Docker, Kubernetes, GitHub Actions | PostgreSQL, MongoDB, Redis | Jest, PyTest, Cypress