

# Muhammad Moiz

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## EDUCATION

**Dartmouth College — B.S. Computer Science & Engineering (5-Year Dual-Degree), GPA: 3.7** Expected Jun 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 3x.
- 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