

# Keshav Worathur

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## Education & Certifications

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- Master of Science in Computer Science** Aug. 2025. - Dec. 2026 (Expected)  
Georgia Institute of Technology Atlanta, GA
- Relevant Coursework: Machine Learning Security
- Honours Bachelor of Science in Computer Science** Sep 2020. - Jun . 2025  
University of Toronto | GPA 3.94/4; Dean's List Mississauga, ON
- Relevant Coursework: Software Design (git, Java), Programming on the Web (Django, HTML, CSS)
- AWS Certified Solutions Architect - Associate** Apr. 2025

## Awards

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- Best Presentation Award - UTMSU Undergraduate Research Symposium** Apr. 2024
- Awarded the best presentation award (valued at CAD \$1,000) out of a field of 65+ submissions for work on AI/ML and deep learning for brain tumor classification and novel contributions to AI explainability.

## Experience

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- QA Automation Specialist** Jul. 2024 - Aug. 2025  
Lenovo Testing Center of Excellence (TCOE) Toronto, ON
- Developed an automation framework using **Typescript** for integration testing of Freedom Mobile's desktop and web applications, reducing QA regression execution time per release by 80 hours and earning a raise within 8 months.
  - Trained a team of ten software testers in **Jenkins** for automated data creation, creating scripts that automated over 100 account creations in under 30 minutes, ensuring reliability of business critical microservices.
  - Adhered to the Software Development Lifecycle (SDLC) best practices throughout the development process, ensuring high-quality deliverables and efficient project execution.
  - Collaborated with the director of DevOps to develop cloud **CI/CD pipelines** using **GitHub** (version control) and **Docker** containers to run tests during deployment to staging environments, saving 10 hours per sprint.
- Computational Research Assistant** Aug. 2024 - Jul. 2025  
Gene2Lead Toronto, ON
- Developed a machine learning pipeline using **Python** (PyTorch) to analyze the human proteome, enabling researchers to process datasets of up to 7 million protein-drug interactions, accelerating drug discovery.
  - Pitched a user-friendly visualization tool developed with **React**, **WebGL**, and **FastAPI** for understanding proteomic data, which led to adoption by 8 Gene2Lead researchers and positive feedback on usability.
  - Deployed protein feature extraction, training, inference and reporting pipelines on **AWS Sagemaker** to facilitate greater visibility into research project progress and data sharing.
- Software Engineering Intern** May 2023 - Aug 2023  
ERP Tech Robo Dallas, TX
- Engineered RESTful APIs using Java **Spring Boot**, focusing on optimizing data retrieval from SQL database and ensuring seamless integration with the existing Linux server infrastructure, supplying data to 5+ Spring MVC views.
  - Redesigned the **MySQL** database schema to eliminate data duplication errors and improve data integrity, and optimized ORM queries to reduce execution times by 30% .
  - Secured the application using **role-based authentication** by defining administrator, HR, finance, office of the dean roles.

## Personal Projects

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- PaintParty** | Javascript, AWS (Lambda, DynamoDB) | [Demo Video](#) Nov. 2023 - Dec. 2023
- Spearheaded development of a platform for thousands of users to simultaneously paint pixels of a large canvas, broadcasting updates to all users in real-time using a **WebSockets** API and Redis.
  - Leveraged Amazon serverless services (**Lambda** and **API Gateway**) to handle web traffic at internet scale, supporting 150k+ concurrent requests to the application and ensuring resilience.
  - Implemented infrastructure as code (**Terraform**) for orchestration of cloud resources, reducing deployment times by 40%.