Madhuv Sharma

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LinkedIn · **GitHub**

Education

Bachelor of Computer Science (AI Specialization) - Senior Year — University of Waterloo
Excellent Standing — Expected Graduation: Apr 2026

Work Experience

360 Education Labs Inc. — North York, ON
Software Developer — Jan - Jul 2024, May - Aug 2023, Sep - Dec 2022

- Developed and optimized cross-platform mobile applications for iOS and Android using **React Native**, improving app functionality and delivering a seamless, consistent user experience across devices.
- Implemented app and universal linking to enable cohesive web-mobile integration; leveraged AWS infrastructure (**CloudFormation**, **API Gateway**, **DynamoDB**, **Lambda**) to ensure scalability and resilience, reducing cold start times by 40% with TypeScript migration.
- Designed and developed custom plugins for Microsoft PowerPoint and Mac Keynote using **C#** and **Swift**, enhancing presentation functionality and providing unique features for end-users.
- Integrated multiple Learning Management Systems (LMS) such as Canvas, Blackboard, Moodle, and D2L, enhancing the digital learning experience by enabling seamless content delivery, real-time interaction, and platform interoperability.

MathSoc: Mathematics Society — UWaterloo
CS Representative & Election Committee Member — Jan - Aug 2022

Projects

Job Recommendation System for WaterlooWorks
Python, Neural Embeddings, Cosine Similarity

- Engineering a tailored recommendation system using **neural embeddings** and **cosine similarity**, achieving top 10% match accuracy and continuously improving job relevance for students.
- Enhancing user experience by delivering more accurate job matches and optimizing the job search process within the WaterlooWorks platform.

Incremental Computation Optimization in Ray • **GitHub**
Ray, Python, Algorithm Optimization

- Modified **Ray** to implement incremental computation, significantly reducing execution time for large-scale distributed tasks, validated using the **Longest Common Subsequence (LCS)** problem.
- Achieved measurable performance improvements by testing and benchmarking the optimized model, demonstrating faster computation on large datasets.

3D MRI Visualization for Alzheimer's Diagnosis • **GitHub**
Python, VTK, Mayavi, PyVista, RNNs

- Developed a comprehensive solution integrating **3D MRI visualization** and **RNN-based prediction models** to assist in Alzheimer's diagnosis and track disease progression.
- Built and deployed an interactive platform tailored for clinicians, enhancing prediction accuracy and providing valuable insights for early intervention.

Chess Application • **GitHub**
C++, Object-Oriented Programming

- Developed a fully functional **Chess application** in C++, encompassing all standard chess functionalities with an intuitive command-line interface.
- Implemented accurate move generation and ensured strict adherence to chess rules for an authentic and engaging user experience.

Hackathons:
Cath Con (Finalist), NeoHacks, Meta Hacker Cup, Youth Culture (Best Prototype), CODS COMAD

Awards

President's International Experience Award — University of Waterloo
- Awarded $1,500 for excellence in international experiences. — Jul 2024

Entrance Scholarships — University of Waterloo
- $20,000 Faculty of Mathematics International Excellence Award - India — Mar 2021
- $2,000 Presidential Merit Scholarship

Euclid Contest — University of Waterloo
- Certificate of Distinction; International Roll of Honor — May 2021