

# Amaan Khan

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## Research Interests

Trustworthy AI, ML Security and Adversarial Robustness, Cyber-physical systems

# Education

# Washington University in St. Louis

# Master of Science in Cybersecurity Engineering

Expected 2027

Graduate Certificate in Machine Learning and Data Mining

**Washington University in St. Louis**

Bachelor of Science in Computer Science

2025

# Research Experience

## Cake-Cutting Fairness Explorations

2025

Washington University in St. Louis, CSE REU Program

Advisor: Dr. Ron Cytron

- Studied and implemented fair division algorithms including cut-and-choose, divide-and-choose, and envy-free protocols for divisible and indivisible resources
  - Analyzed algorithmic trade-offs between fairness criteria (proportionality, envy-freeness, Pareto efficiency) in resource allocation
  - Developed educational exercises demonstrating computational complexity and game-theoretic properties of cake-cutting algorithms for Mozilla's Responsible Computer Science curriculum

## Teaching Experience

Washington University in St. Louis

Department of Computer Science and Engineering

## Teaching Assistant Positions:

CSE 468T - Introduction to Quantum Computing (One semester)

2025

CSE 131: Introduction to Computer Science (Three semesters)

2022-2023

Department of Mechanical Engineering and Materials Science

MEMS 202: Introduction Computer-Aided Design (One semester)

2022

## **Leadership & Activities**

### **WashU Robotics**

SWARM Team, Software Engineer

2024–Present

### **WashU AI Racing**

Perception Team, Software Engineer

2026

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## **Awards & Honors**

CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference Scholarship, 2025. Full scholarship from Washington University McKelvey School of Engineering