TAMARA MITROVSKA

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EDUCATION

Massachusetts Institute of Technology (MIT)   **Cambridge, MA**
Master of Engineering in Computer Systems, GPA: 5.0/5.0   June 2023
Massachusetts Institute of Technology (MIT)   **Cambridge, MA**
Bachelor of Science in Computer Science and Engineering, GPA: 5.0/5.0   May 2022
Yahya Kemal College (High School)   **Skopje, North Macedonia**
Valedictorian, GPA: 5.0/5.0, International Math Olympiad ('17, '18)   June 2018

EXPERIENCE

MiiM   **Cambridge, MA**
Software Engineer   Jul 2023 - present
- Developed and deployed two Angular web applications, now used daily by around 20 internal users
- Cut manual processing costs by 65% by implementing an enhanced and optimized user interface for data labeling
- Implemented a comprehensive test suite with Jasmine and Cypress, integrated with CircleCI to streamline the CI/CD pipeline, improving deployment speed and reliability
- Developed RESTful API endpoints using Java and PostgreSQL
- Automated infrastructure deployment using Terraform, leveraging AWS S3 and CloudFront for static website hosting
- Contributed to system reliability through on-call support, diagnosing and resolving errors and performance issues to maintain optimal system health

MIT CSAIL - COMMIT Group   **Cambridge, MA**
Graduate Researcher   Sep 2022 - May 2023
- Researched regular expression matching algorithms and optimization methods used by engines like RE2 and Hyperscan
- Developed a high-performance regular expression library in C++ using multi-stage programming with BuildIt

Akamai Technologies   **Cambridge, MA**
Software Engineering Intern   Jun - Aug 2022
- Optimized geographic server allocation by implementing a bin packing heuristic to improve resource utilization
- Built a data pipeline for comparing and analyzing real-time and forecasted traffic data using Python, SQL, and Bash, enabling data-driven decision making
- Developed knee detection algorithms to estimate cache space requirements for specific content classes by leveraging cache hit graphs

MIT CSAIL - CAP Group   **Cambridge, MA**
Undergraduate Researcher   Feb - May 2022
- Automated method signature and docstring generation in Python from natural language app descriptions using GPT-3
- Developed a new web application feature in React to demonstrate the automated method signature generation process

MIT CSAIL - COMMIT Group   **Cambridge, MA**
Undergraduate Researcher   Feb - May 2022
- Developed a high-performance convolutions library in C++ using multi-stage programming with BuildIt
- Designed and implemented custom code generation for arbitrary dimensions, incorporating advanced scheduling techniques such as parallelization, vectorization, loop tiling, and unrolling for performance optimization

MIT CSAIL - ALFA Group   **Cambridge, MA**
Undergraduate Researcher   Feb 2020 - Dec 2021
- Implemented adversarial attacks on code-related machine learning models by performing optimally selected Abstract Syntax Tree (AST) transformations
- Developed a robust evaluation pipeline using PyTorch to test model performance under adversarial conditions, enhancing the resilience of state-of-the-art models
- This project led to publications at the ICLR 2021 and SANER 2023 conferences

InstaDeep   **Tunis, Tunisia**
Software Engineering Intern   May - Aug 2020
- Conducted a literature review on the 3D bin packing problem, summarizing recent advancements and key methodologies
- Implemented optimization heuristics in Python to enhance volume utilization in existing 3D bin packing algorithms

International Institute of Information Technology   **Hyderabad, India**
Information Retrieval and Extraction Lab Intern   Jun - Aug 2019
- Developed a binary classifier using traditional machine learning models to differentiate body shaming posts from other content on Instagram, leveraging scraped data based on hashtags
- Built a user-friendly interface with Python and Flask to showcase the classifier's functionality
- The project's outcomes were published at Soc Info 2022 (International Conference on Social Informatics)

SKILLS

Technical skills: Python, C/C++, Java, Linux/bash, SQL, HTML, CSS, JavaScript, AngularJS, Git, AWS
Languages: English (proficient), Macedonian (native), Turkish (intermediate), Spanish (intermediate)