HM

HANNAH R. MARSH

hannah.marsh@tufts.edu | 603-953-3094 | Bedford, NH 03110

Experience

Kratos Defense and Security Solutions | San Diego, CA
Software Engineer Intern
05/2023 - 08/2023

- **Role:** Conceptualized, designed, and developed a website for integrating interactive Platform-Focused User Interface elements.
- **Outcome:** Orchestrated and executed a detailed demonstration of the project's impact to senior executives, receiving critical acclaim and an offer for a full-time Software Engineer position based on proven capabilities (declined to pursue PhD).

Kratos Defense and Security Solutions | San Diego, CA
Software Engineer Intern
05/2022 - 08/2022

- **Role:** Migrated several legacy satellite drivers, improving compatibility and increasing performance for critical hardware components.
- **Outcome:** Presented the strategic benefits of the upgrades to senior management, which significantly influenced the decision to extend an offer for continued part-time employment and a return internship.

Education

Tufts University | Medford, MA
Doctor of Philosophy in Computer Science
In Progress

University of New Hampshire | Durham, NH
Bachelor of Science in Computer Science
Graduated 05/2024

- 3.96 GPA
- Graduated *Summa Cum Laude*

Research

A Selective Replication Solution to Reduce Database Instability
Independent Study, University of New Hampshire
11/2024 - PRESENT

- **Innovation:** Engineered and simulated complex database interactions using Go-lang to model the effects of cache node failures on system stability, improving our understanding of fault tolerance mechanisms.
- **Implementation:** Developed and implemented a novel selective replication strategy across cache nodes achieving significant enhancements in system resilience. Ongoing assessments aim to optimize and validate this approach.
- **Impact:** Preparing to author a comprehensive research paper that will outline the methodology, results, and potential industry applications.

Academic Projects

Mobile VR Lab
Capstone Experience, University of New Hampshire
08/2024 – 05/2024

- **Objective:** Develop an immersive VR educational system designed to blend guided tours with interactive 3D exploration.
- **Technologies Used:** Unity, Android studio, Oculus headsets, C#, Java, Rust.
- **Results:** Successfully showcased the Mobile VR Lab project at the University of New Hampshire's Undergraduate Research Conference (URC) in April 2024, demonstrating its effectiveness in an academic setting.

Honors & Awards

- **Highest Honors** – May, 2023, 06/2023, *University of New Hampshire Dean's List*
- **S. Robert Levine and Craig R. Benson Technology Scholarship**, 05/2023
- **Highest Honors** – May, 2022, 06/2022, *University of New Hampshire Dean's List*
- **NASA Space Grant Scholarship**, 12/2021

Skills

- Object-Oriented Programming:
  - Java, C++, Swift
- Functional/Hybrid Programming:
  - Scala, Python, Go, JavaScript
- Procedural Programming:
  - C, bash
- Web Development:
  - HTML, CSS, TypeScript/JavaScript (NodeJS, Angular, Ruby)
- Version control: git
  - BitBucket, GitLab, GitHub
- Satellite Communication Systems:
  - Ground system operations
  - Integrating satellite payloads
- Cybersecurity Principles and Applications
- Microservice Design
- API Development
  - REST
- Agile & Scrum Methodologies

Find Me Online

- Website: HannahMarsh.github.io
- LinkedIn: www.linkedin.com/in/hannah-marsh-636678291