

Rumi Khamidov

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EDUCATION

Virginia Tech

Blacksburg, Virginia

B.S. Computer Science, Mathematics Minor; GPA: 3.72

May 2026

Organizations: BOLT, Russian-Speaking Student Association, SASE, CS Careers, MLH, VioletHacks

Relevant coursework: Data Structures and Algorithms, Computer Organization, Multivariable Calculus, Discrete Math, Applied Combinatorics and Graph Theory

Awards: 2024-2025 American Bureau of Shipping Scholarship recipient, Dean's List (Spring 2024 (with distinction), Fall 2023), VTHacks and HackViolet Winner

SKILLS

Programming Languages: Python, Java, TypeScript, JavaScript, CSS 3, HTML 5, Bash, SQL, LaTeX, C/C++(familiar)

Tech Stacks: Docker, Flask, React, React Native, Tailwind CSS, Expo Go, Git, Axios, Express Framework, NodeJS, PostgreSQL, MySQL

WORK EXPERIENCE

National Science Foundation

George Mason University

Software Engineering Intern

June 2024 – Present

- Presented ClassX: the Machine Learning based, **NASA, NSF, and GMU** sponsored, project at the **2024 Spatiotemporal International Symposium**.
- Optimized **Docker** image size of web app and environment with a **57%** size reduction and a **60%** decrease in build time through **multi-stage building** and **volume mounting** using Agile methodology.
- Constructed a RESTful image and mask Python export script from the tool and offers support for exporting in multiple file types like **8 and 16 bit PNG, HDF5, JPG, COCO, etc.** in less than **4 seconds** for over **100 cropped images**.

Prime Lab

Virginia Tech

Software Engineering Intern

Jan 2024 – May 2024

- Provided an interactive Java and Python programming learning tool, VizPI, utilizing AI for over **200** undergraduate students.
- Redesigned **REST API** calls to ensure seamless backend integration, migrated data handling from Firebase to **PostgreSQL** database via secure fetch requests using **Axios and Express**, contributing to robust application development.
- Remodeled the UI/UX of the webpage's create-a-session prompt, list of previous sessions, and student error visualization using the **MUI** and **React** libraries to ensure a sleek yet informative design on the instructor end of the product.

PROJECTS

VTHacks 2024 WINNER: VisionLink

September 2024

- Engineered the 'Best Diversity, Inclusion, and Equity Hack' via an AI-implemented, object-detecting visual aid inspired by the **over 400 visually impaired** students at Virginia Tech.
- Implemented haptic feedback that activates based on proximity parameters: **1.5 meters, 1 meter, and 0.5 meters** and increases in intensity as the user gets closer to objects, people, hazards, etc.

HackViolet 2024 WINNER: Baby Blues

February 2024

- Constructed the 'Best Hack to Support Women' that implements **Hume AI API** to quantify emotions based on speech (on a confidence scale of **0.0 - 1.0**) in tandem with **Spotify's API** to recommend playlists as part of music therapy for women suffering postpartum depression.
- Coordinated the team and was the lead designer for the front-end using **React Native** and **Expo Go** to create a minimalistic UI/UX with playable embedded Spotify playlists and graphs of the most common emotion expressed throughout the day.

Project Torch: The Burg Website

April 2024 – June 2024

- Built a responsive **Vite + React** website for a local business in Blacksburg for free in a team of other Virginia Tech computer science students.
- Created the home page and navigation bar using the **Bootstrap and MUI** React libraries with **Tailwind CSS** for extra customization and creating a unique visual design.

EXTRACURRICULARS

CoStar College Program | Richmond, VA

March 2024

- Shadowed **Owen Richards**, a software developer at CoStar's **Richmond Headquarters**, and discussed some technologies used like **CI/CD Pipeling and SQL** at Costar.
- Attended a panel of keynote speakers like **Micheal Morrison**, Senior Director of Software Development, and junior & senior software developers.