

# Rumi Khamidov

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## EDUCATION

### Virginia Tech

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

Blacksburg, Virginia

*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

## SKILLS

**Languages:** Python, Java, JavaScript, CSS 3, HTML 5, LaTeX, C/C++, SQL, Bash, MatLab

**Tech Stacks:** Docker, React, React Native, Tailwind CSS, Expo Go, Git, Axios, Express, Bootstrap, NodeJS, PostgreSQL

## RESEARCH

### ClassX

*REU Intern*

George Mason University

*June 2024 – Present*

- Back-end and DevOps intern for ClassX: an **AI-based**, semi-auto labeling tool funded by **NASA, NSF. and GMU** with services in the Arctic and Heliophysics (solar) research fields.
- 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**.
- 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**.
- Presented at the **2024 Spatiotemporal International Symposium** about the refactoring and modularization of the previous iteration of the project using **Flask**, a lightweight Python web framework.

### Prime Lab: VizPI

*Contributor*

Virginia Tech

*Jan 2024 – May 2024*

- Worked directly with Virginia Tech professors, researchers, and Computer Science Department faculty members to provide an interactive Java and Python programming learning tool utilizing AI for over **200** undergraduate students.
- Overhauled **REST API** calls to ensure seamless backend integration, migrated data handling from Firebase to **PostgreSQL** 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

### HackViolet 2024 WINNER: Baby Blues

- Constructed the 'Best Hack (app) 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

- 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.

### BOLT: Wireless Communications

- Established the functionality to wirelessly transfer **64 - 128 bytes** of encrypted motorcycle data every **500 milliseconds** using **XBee** transmitters.
- Worked in collaboration with the **CAN Testbench team**, which gathered the performance and analytical data from the motorcycle, as we successfully sent and received information through **XCTU**.

## EXTRACURRICULARS

### BOLT

*Software Developer*

Virginia Tech

*Oct 2023 – Present*

- Club Description: A design team of VT Engineers spearheading the construction of a fully electric motorcycle used for competitions, hands-on experience working with a team, and collaborating on interdisciplinary projects within BOLT.
- Role: Remodeled the controls design and established data collection and dispersion algorithms for the electric motorcycle.