

ALEXI GLADSTONE

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EDUCATION

University of Virginia, School of Engineering

August 2020 - May 2024 (Expected)

Bachelor of Science in Computer Science — Data Science Minor — 4.0 Cumulative GPA

Relevant Courses: Machine Learning • Data Structures & Algorithms • Computer Architecture • Advanced Software Development • Robotics for Software Engineers • Cybersecurity • Theory of Computation • Software Development Fundamentals • Digital Logic Design • Probability • Statistics • Linear Algebra • Discrete Math • Differential Equations • Data Science with R

Awards/Honors: Admitted into Rodman Scholar Engineering Honor's program - representing top 5% of University of Virginia (UVA) engineering students • Dean's Summer Undergraduate Research Fellowship - one of less than ten 3rd years to receive • Valedictorian of Forest Park High School • Alex and Barbara Sadler Scholarship

SKILLS

Languages

C++, C, C#, Java, Python (PyTorch, PyTorch Lightning, Hugging Face, TensorFlow, Keras, Scikit-Learn, NumPy, Pandas, Matplotlib), SQL, NoSQL, R, x86, Slurm, LaTeX

Tools/Frameworks

Git, Linux, Docker, Django, Amazon S3 (AWS), Unity3D, ROS

PUBLICATIONS

- Md Mofijul Islam, Reza Manuel Mirzaiee, **Alexi Gladstone**, Haley N. Green, Tariq Iqbal. "CAESAR: An Embodied Simulator for Generating Multimodal Referring Expression Datasets." Conference on Neural Information Processing Systems 2022 Datasets and Benchmarks Track
- Md Mofijul Islam, **Alexi Gladstone**, Tariq Iqbal. "PATRON: Perspective-aware Multitask Model for Referring Expression Grounding using Embodied Multimodal Cues." AAAI 23 Conference on Artificial Intelligence
- [Under Review] Md Mofijul Islam, **Alexi Gladstone**, Riashat Islam, Tariq Iqbal. "EQA-MX: Embodied Question Answering using Multimodal Human Expression" CVPR Conference on Computer Vision and Pattern Recognition 2023

WORK HISTORY

Research Assistant, Collaborative Robotics Lab @ UVA, Charlottesville VA

November 2021 - Present

- Led team of 3 undergraduate students in development of simulator to automatically generate hundreds of thousands of data samples in Unity 3D using C#
- Utilized and debugged simulator to produce over 1 terabyte of labeled data on a Linux-based server
- Eradicated memory leak of one gigabyte per sample by profiling over 50 GB of memory on multiple computers
- Created novel multimodal fusion models using PyTorch that successfully grounded perspective and objects

Research Fellow, Collaborative Robotics Lab @ UVA, Charlottesville VA

May 2022 - August 2022

- Wrangled, cleaned, and visualized 500+ GB of data using Python (Pandas, Matplotlib, Numpy, Seaborn) to create 50+ data visualizations for the CAESAR and PATRON papers (see publications above)
- Expanded simulator to include three new modalities on top of standard RGB images - a skeletal pose capture, a depth map camera, and an object segmentation mask - to design novel computer vision and natural language processing fusion models
- Implemented 3D spatial relation and object location grounding system to ensure models understand spatial relations in different environments and generalize better to real-world scenarios
- Reviewed three papers for NeurIPS 2022 revolving around 6D object pose and imitation learning, egocentric question answering, and an autonomous vehicle benchmarking tool

Cofounder/Software Engineer, Yuri LLC, Dumfries VA, [GitHub](#)

May 2021 - November 2021

- Built a game for startup as lead software engineer, managed codebase of 10,000+ lines of code
- Developed 3D drawing and projection algorithms for dynamic terrain to accurately visualize character paths
- Created spatially and environmentally aware Enemy AI using state machines
- Spent 20-30 hours per week building front-end and back-end and led biweekly meetings of 4 – 6 people

Teaching Assistant, CS Software Fundamentals @ UVA, Charlottesville VA

August 2021 - December 2021

- One of two TA's who aided in the creation of course content through developing exam questions and assisting in the creation of a major programming assignment
- Assisted 200+ students in solution generation and debugging on programming homeworks and labs