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 • Operating Systems • Computer Architecture • Advanced Software Development • Robotics for Software Engineers • Data Science with R • Cybersecurity • Human Robot Interaction • Databases • Theory of Computation • Software Development Fundamentals • Digital Logic Design • Probability • Statistics • Linear Algebra • Discrete Math • Differential Equations
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

- [Under Review] Md Mofijul Islam, **Alexi Gladstone**, Riashat Islam, Tariq Iqbal."EQA-MX: Embodied Question Answering using Multimodal Human Expression" ICCV International Conference on Computer Vision 2023
- 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
- 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

WORK HISTORY

Research Assistant, Collaborative Robotics Lab @ UVA, Charlottesville VA **November 2021 - Present**
- Created and trained dozens of novel multimodal learning models using PyTorch Lightning and Slurm that achieved state-of-the-art object detection performance on existing referring expression comprehension datasets
- Actively participated in the brainstorming process for the creation of an EQA dataset (EQA-MX), contributed key idea in image to depth model
- Developed generative depth estimation models using stable diffusion
- Led team of 3 undergraduate students in development of simulator to automatically generate hundreds of thousands of data samples in Unity 3D using C#
- Eradicated memory leak of one gigabyte per sample by profiling over 50 GB of memory on multiple devices

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 three papers
- Reviewed three papers for NeurIPS 2022 Datasets and Benchmarks track
- Utilized and debugged simulator to produce over 1 terabyte of labeled data on a Linux-based server

Cofounder/Software Engineer, Yurii 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
- 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