ALEXI GLADSTONE

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EDUCATION

University of Virginia (UVA), 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 ● Cryptocurrency

Awards/Honors: Admitted into Rodman Scholar Engineering Honor's program - admitted as top 5% of UVA engineering students ● Dean's Summer Undergraduate Research Fellowship - one of less than ten 3rd years to receive ● Alex and Barbara Sadler Scholarship ● Donald and Jean Heim Scholarship ● Valedictorian of Forest Park High School

SKILLS

Languages	C++, C, C#, Java, Python (PyTorch, PyTorch Lightning, Hugging Face, TensorFlow, Keras, Scikit-Learn, NumPy, Pandas, Matplotlib), SQL, NoSQL, R, Bash, Slurm, LaTeX, TypeScript
Tools/Frameworks	Git, Linux, Docker, Django, Amazon S3 (AWS), Unity3D, ROS

PUBLICATIONS

- [Under Review] Md Mofijul Islam, Ganesh Nanduru, **Alexi Gladstone**, Sujan Sarker, Keyan Du, Srikar Gouru, Tariq Iqbal. "COBRA: Comprehending Embodied Referring Expressions from Multiple Perspectives Using Language and Visual Cues" IEEE Transactions on Pattern Analysis and Machine Intelligence

- [Under Review] Md Mofijul Islam, **Alexi Gladstone**, Tao Groves, Tariq Iqbal, "SDD: A Shape Guided Diffusion Model for Generating Depth"

- [Under Review] Md Mofijul Islam, **Alexi Gladstone**, Riashat Islam, Tariq Iqbal. "EQA-MX: Embodied Question Answering using Multimodal Human Expression" WACV Winter Conference on Applications of Computer Vision 2024

- 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

Forward Deployed Software Engineer, Palantir Technologies, New York, New York May 2023 - Present

- Brainstormed with machine learning research team to develop novel multi-object tracking models capable of updating from real time user input

- Developed real-time news analysis application leveraging LLMs and prompt engineering

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