MAXIMUS PACE

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https://www.maximuspace.com

EDUCATION

Cornell University *September, 2020 - May, 2024*

Bachelor of Arts in Computer Science, Mathematics **GPA: 4.09**

Course work: Robot Learning, Machine Learning, Computer Vision, Analysis of Algorithms, Honors Object Oriented Programming & Data Structures, Functional Programming, Compilers & Formal Languages, Honors Linear Algebra, Abstract Algebra, Probability, Honors Real Analysis, Complex Analysis

PUBLICATIONS

- Huaxiaoyue Wang, Kushal Kedia, Juntao Ren, Rahma Abdullah, Atiksh Bhardwaj, Angela Chao, Kelly Y Chen, Nathaniel Chin, Prithwish Dan, Xinyi Fan, Gonzalo Gonzalez-Pumariega, Aditya Kompella, **Maximus Adrian Pace**, Yash Sharma, Xiangwan Sun, Neha Sunkara, Sanjiban Choudhury. MOSAIC: A Modular System for Assistive and Interactive Cooking. *Under Review at RSS*, 2024 [arXiv]
- Yash Sharma, Yuki Wang, Kelly Chen, **Maximus Pace**, Sanjiban Choudhury. Video2Demo: Grounding Videos in State-Action Demonstrations. *Under Review at ICLR*, 2024

RESEARCH EXPERIENCE

PoRTaL Lab, Cornell University *Professor Sanjiban Choudhury* *March, 2023 - Present*

- Experimented with comparing classification and regression behavioral cloning policies to test generalization from recovery and errors
- Trained a mobile manipulator robot to identify and grasp objects using visuomotor behavioral cloning over a multimodal action space
- Implemented diffusion learning and sequential learning policies using camera data and joint states to evaluate performance and contrast to simpler algorithms

TEACHING EXPERIENCE

Discrete Structures TA *August, 2021 - December, 2021; August, 2022 - May, 2023*

- Promoted to Head TA in Spring, 2023 with Lecturer Anke van Zuylen
- Rated average overall score of 4.94/5.0 from 17 students on anonymous feedback survey
- Led discussion sections of 30 students and held office hours assisting 30 students per week on problem sets
- Created homework and exam rubrics and led grading sessions of 11 TAs to grade 400 submissions

Functional Programming and Data Structures Consultant *January, 2022 - May, 2022*

- Held office hours assisting 20 students per week with coding assignments and exam preparation
- Graded 10 submissions for each programming assignment for accuracy and code quality

PROFESSIONAL EXPERIENCE

Founder and CTO of Synopsis *August, 2022 - Present*

- Developed front-end and back-end for automatically generating story-based data science slide decks to make corporate research communication engaging

- Researched business viability and conducted 80 customer discovery interviews to test hypotheses
- Raised $15,000 in grants and pitched at Autodesk Gallery through eLab business accelerator

Controls Software Engineer on Cornell Mars Rover *November, 2020 - Present*

- Trained semantic segmentation model to identify keyboards and extract locations of key to enable automatic typing
- Overhauled classification model for rock images, improving validation accuracy from 30% to 70%
- Rewrote vision systems for ROS 2, enabling integration with newer frameworks and enhancing camera capabilities in competition
- Operated rover in University Rover Challenge 2023, adapting to controller malfunctions by manipulating drives through ROS command line and resolving camera failures ad hoc, ensuring continued performance

Software Engineer Intern at Guidewire Software *May, 2022 - August, 2022*

- Built asset management tool and designed UI to reveal abandoned curation assets, saving $1200/month in unnecessary AWS costs
- Expanded data curation API in Kotlin to expose data relationships, enabling accessibility for 30 developers
- Restructured customer data platform class setup to reduce data redundancy, creating a cleaner interface
- Created SQL query tests for join statements for better reliability in production

Mobile Developer Intern at rapStudy *May, 2021 - September, 2021*

- Led development of song player for new React Native app for school-sponsored use by over 5000 students
- Created seamless synchronization system for aligning over 200 songs with their lyrics in real-time

GRANTS AND AWARDS

Bowers Undergraduate Research Experience & Summer Experience Grant *May, 2023*

- Granted $4,599 for conducting computer science research over the summer on imitation learning

Excellence as Course Staff Nomination *May, 2023*

- Nominated by faculty for hard work and strong performance as a TA in a Bowers CIS course

Cane Entrepreneurship Scholars *May, 2023*

- Awarded $5,000 for the development and growth of a unique startup

Beck Entrepreneurship Fellowship *December, 2022*

- Awarded $5,000 for strong demonstrated interest and involvement in entrepreneurship, academic excellence, and intention to pursue a startup idea during the summer

TECHNICAL SKILLS

Python (PyTorch, ROS, OpenCV, NumPy, MatPlotLib), Java, OCaml, JavaScript

REFERENCES

Sanjiban Choudhury, Ph.D., Assistant Professor at Cornell University *sanjibanc@cornell.edu*

Anke van Zuylen, Ph.D., Senior Lecturer at Cornell University *avz2@cornell.edu*

Gregory Ray, Ph.D., Entrepreneur in Residence and Visiting Lecturer at Cornell University *gcr45@cornell.edu*

Matt Halstead, Staff Software Engineer at Guidewire Software Inc. *mhalstead@guidewire.com*