

Zachary Sullivan

zas579@g.harvard.edu | zacharysullivan.net | GitHub.com/ZachSullivan
Boston MA

Profile

Enthusiastic, highly motivated graduate student with a deep commitment to research into Machine Behavior and video game development projects with creative merit and social benefits.

Education

HARVARD UNIVERSITY 2019 – 2023

Master of Liberal Arts, Extension Studies, Software Engineering

- GPA: 3.6
- Research emphasis on video game ai behavior using populations of behavior tree-based agents leveraging specialized algorithm known as *Evolving Reinforced Behavior - A Darwinian Approach to Adaptive Behavioral Agents*

CARLETON UNIVERSITY (OTTAWA, CANADA) 2012 - 2016

Bachelor of Information Technology

- CGPA: 8.68/12

ALGONQUIN COLLEGE (OTTAWA, CANADA) 2012 - 2016

Advanced IT Diploma (with Carleton University)

- CGPA: 8.68/12

Technical Skills

IMPERATIVE AND OBJECT-ORIENTED LANGUAGES

- Thorough understanding of several imperative and object-oriented languages including C, C#, C++, Java and Python.
- Comprehensive diagnosis, prognosis and debugging of software programs within tight timeframes, ensuring project completion on a timely basis.

AI/MACHINE LEARNING (ML)

- Knowledge of Python effectively used to further augment work in Data Science and computational statistical analysis / visualization.
- Experience with Python packages including NumPy, pandas, seaborn, statsmodels, and matplotlib. Applying Bayesian inference models to real-world problems.
- Research experience on multi-agency with an emphasis on behavioral reinforcement learning in scaled social agent contexts.

CLOUD SERVICES

- Experience with AWS, leveraging high-efficiency and scalable cloud services to build machine learning solutions with ease.

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Experience

TARGET CORPORATION

SEPTEMBER 2018 – JULY 2019

Logistics – Flexible Fulfillment

- Ran omnichannel fulfillment of online and in-store pickup, driving sales to strategically compete with Amazon.
- Conducted daily backroom audits to ensure accurate store inventory.
- As functional team lead instructed new hires on job responsibilities while troubleshooting pick, pack, and ship fulfillment work.

THOMSON REUTERS

DECEMBER 2016 – FEBRUARY 2017

Software Support Specialist - Internship

- Strengthened debugging skills through resolution of customer technical support inquiries.
- Identified future role for Machine Learning to improve accuracy of information in a proactive fashion.

UNIVERSITY OF OTTAWA AND STATISTICS CANADA

MAY 2015 – SEPTEMBER 2015

Software Developer

- Contributed to the Theoretical Health Inequality Model (THIM) project, modelling population and demography using Statistics Canada's microsimulation tool, Modgen.

CARLETON UNIVERSITY

MAY 2014 – JANUARY 2015

Software Developer

- Successfully developed an interactive simulation model, identifying possible at-risk PTSD patients, for both internal and external research use.

Volunteer Experience

COMMUNITY ACTION COALITION FOR SOUTH CENTRAL WI

SEPTEMBER 2018 – JULY 2019

United Way Volunteer

- Assisted in annual Coats for Kids drive, providing community members with access to warm seasonal clothing.

References available upon request.

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Project Experience

DATA SYSTEMS LABORATORY @ HARVARD

JANUARY 2022 – PRESENT

- Consulted in weekly laboratory meetings providing feedback and accelerating research work

VALENCE: A SUBTERRANEAN GAME

MARCH 2015 – APRIL 2016

Team Lead & AI Programmer

- Directed a C#, agent-based simulation environment with five team members, resulting in dynamic, reactive artificially intelligent character behavior for undergraduate thesis.
- Presented thesis project at an International Game Conference in April 2016.

GLOBAL GAME JAM

2015 – 2017

Game Developer

- Multi-year participant, working concurrently with developers around the world during a 48-hour time limit, to create a game revolving around a predetermined theme.

References available upon request.

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