

Homer Walke

EDUCATION

Brown University - Sc.B in Computer Science

Providence, RI | Anticipated Graduation: May 2021

- GPA: 3.94/4.0
- Relevant coursework: Artificial Intelligence, Deep Learning, Algorithms, Theory of Computation, Multivariable Calculus, Discrete Structures and Probability, Probabilistic Methods in CS, Statistical Inference, Linear Algebra

Decatur High School

Decatur, GA | Graduated May 2017

- GPA: 4.7/4.0
- Received International Baccalaureate Diploma

EXPERIENCE

Machine Learning Undergraduate Research

January 2019 - Present

- Collaborated with Professor Michael Littman on various machine learning research topics
- Proved results related to the machine learning theory of linear temporal logic, i.e VC-dimension, Rademacher complexity etc.
- Currently working on a paper about agnostic PAC learning of finite linear temporal logic formulas using a partial MAX-SAT solver

National Science Foundation Summer Research

May 2019 - August 2019

- Worked on [NSF Award #1837120](#); applied machine learning techniques to ease end-user programming of Internet-of-Things devices
- Collaborated with the SUPERgroup at the University of Chicago, edited and revised conference papers
- Developed a decision tree based algorithm to learn trigger-action programs for smart home automation
- Presented results in a [poster](#) at the Brown Summer Research Symposium

Teaching Assistant in Brown CS Department

September 2018 - December 2018

- Helped run CS 17, one of Brown's intro computer science courses
- Held TA hours to assist students in understanding course material
- Designed problems for assignments, graded student work, and directed interactive labs

Internship with Emory University Sociology Department

June 2018 - August 2018

- Developed a mobile app for the 2018 International Society for Justice Research Conference
- Handled departmental administrative tasks

Internship with Georgia State University History Department

May 2016 - July 2016

- Developed a prototype of a history textbook that uses virtual reality with Unity 3D and C#
- Assisted with the development of online course software using HTML, JavaScript, and PHP

Open Hand Atlanta

May 2013 - August 2017

- Volunteered to pack and deliver meals to low income men, women, and children who are homebound with critical, chronic, or terminal diseases

SKILLS

- Proficient in Python, Java, C, HTML, JavaScript, OCaml, Scheme
- Experience with data structures, algorithms, machine learning, and machine learning theory
- Conversational Spanish
- Activities: Brown University Band (general manager), Brown Outdoor Leadership Training

RELEVANT PROJECTS

- Created a hidden Markov model to filter noisy touchscreen data
- Designed reinforcement learning algorithms to complete tasks in the Gym OpenAI toolkit
- Developed an iOS app for the iPhone/iPad App Store