3 Ames St
Cambridge, MA 02142
+1 (623) 326 5102
agarret7@mit.edu

Austin J. Garrett

Education

Cambridge, MA — **Double Major Candidate for BS, Physics and Computer Science**
June 2019 — *Massachusetts Institute of Technology*
GPA: 4.3/5.0

Coursework
Quantum Mechanics I/II, Special Relativity, Introduction to CS, Computational Structures, MIT Battlecode. *Current semester:* Elements of Software Construction, Introduction to Machine Learning, Statistical Physics

Experience

Cambridge, MA — **MIT Computational Structure and Galaxy Formation Group**
Sep 2016-Present — *Undergraduate Researcher*

- Run high-resolution N-body simulations of dark matter halos under the proposed cold self-interacting dark matter model at Harvard's FAS Research Computing Cluster.
- Design software in Python to analyze various output data from the simulation and its dynamic change under varying ratios of excited to ground state WIMPs.
- Contribute to the publication of said research in an academic journal.

Cambridge, MA — **MIT Computer Science Department**
Sep 2016-Present — *Lab/Teaching Assistant*

- Teach students the fundamentals of computer science through the use of robot sensing, circuital design, control theory, and Bayesian modeling.
- Directly tutor students in Python and provide hands-on lab experience in designing the various aspects of a sensing robot.

Tempe, AZ — **ASU Physics Department**
June-Aug 2016 — *Undergraduate Researcher*

- Analyzed different models of velocity distributions in dark matter halos for the purposes of advancing knowledge in direct detection experiments.
- Coded a set of tools for analyzing the accuracy of these different predictions using a Python extension of MultiNest, a Bayesian inference tool for physical models.

Leadership

Cambridge, MA — **MIT Undergraduate Practice Opportunities Program**
Oct 2016-Present — *Student Participant*

- Engaging in a yearlong professional development program that prepares MIT undergraduates for success and leadership in the workplace, culminating in a one-week workshop taught by MIT faculty and industry professionals.

Skills

Programming — Python, Java, C++, JavaScript, MATLAB

Technologies — Linux, Windows, Mac OS, HTML, CSS, LaTeX, Git, Mathematica, Eclipse