

# Joel Manning

CS Major at CMU



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bokken12



joel-manning

## Programming Languages

Java

Javascript & CoffeeScript

Python

C & C++

C#

## Software

Git and Github

NumPy and SciPy

Unity

OpenCV and BoofCV

## Key Current Courses

Parallel and Sequential Data Structures and Algorithms

Introduction to Computer Systems

Introduction to Cryptography

Undergraduate Complexity Theory

## Key Past Courses

Principles of Imperative Computation

Principles of Functional Programming

Mathematical Foundations of CS

(More) Great Ideas in Theoretical CS

AI: Representation & Problem Solving

Matrices and Linear Transformations

Multidimensional Calculus

## Key High School Courses

Computer Architecture

Programming Languages

Compilers and Interpreters

Numerical Methods

Information Theory

## Education

2019-2023	B.S. Computer Science QPA: 4.0	Carnegie Mellon University
2015-2019	High School GPA: 4.5	The Harker School

## Experience

2020	Machine Learning Intern Part time intern in the Machine Learning Platform & Technology (MLPT), ADPT team.	Apple
2020	15-251 Teaching Assistant Teaching assistant for 15-251: Great Ideas in Theoretical CS, teaching graph theory, complexity theory, randomized algorithms, cryptography, and more to 200 students.	Carnegie Mellon University
2020	Software Engineering & Machine Learning Intern Summer intern in the Siri Experience, Advanced Development Group (ADG).	Apple
2020	15-122 Teaching Assistant Teaching assistant for 15-122: Principles of Imperative Computation Spring 2020, teaching imperative programming along with basic data structures and algorithms in C to 400-500 students.	Carnegie Mellon University
2018	Teaching Assistant Teaching assistant for Introduction to Programming and USACO Bronze classes during the summer and fall sessions. Helped students ranging from grades 3-10 understand and debug their code, graded assignments, and lectured about new concepts.	AlphaStar Academy
2017	Summer Intern Worked under a PhD student on python code using Shapely, NumPy, and SciPy to automatically generate accurate 2D building floor plans from scanned 3D point cloud data.	Stanford Center for Integrated Facility Engineering & Vision Lab
2016-2019	Volunteer Developer Worked remotely with a small team of indie game developers to add features to a released web RTS game Istrolid.	Treeform Games

## Activities

2019-2020	Programmer Wrote "Inhabitants" in a 10-person team using Unity and C#.	CMU Game Creation Society
2015-2019	Executive President, Software Vice President Led the entire team of over 100 members to be finalists in our regional tournaments three times, qualify for world championships twice, and win our subdivision there once. Developed extensive curriculum to train new members of the software team.	Harker Robotics
2016-2019	Developer, Administrator Worked with the school administration on software used by hundreds of students daily to inform, plan, and pay.	Harker Dev

## Awards

2019	Dean's List
2019	National Merit Finalist
2019	National AP Scholar
2019, 2018	HarkerCTF 1st place team.
2018, 2017	Lockheed Martin CodeQuest - 1st place team in Sunnyvale.
2017, 2016	VA Tech H.S. Programming Contest - 2nd, 3rd place team nationally.