

Richard Zhu
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Awards

- United States Physics Olympiad Semi-Finalist, Silver Medalist
 - Johns Hopkins Mathematics Tournament, 2nd place
 - National and State AP Scholar (Most AP exams taken in all of Maryland (21))
 - American Regional Math League, 7th place in the Nation
 - Maryland It's Academic Competition, 1st place
 - Montgomery Science Fair, 2nd place
 - American Computer Science League (ACSL) All-Star Team
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Work & Experience

- **Software Engineering Intern, Coupang** 2015
Implemented autonomous scrapers to crawl competitor websites, expanding the product database by over 10x. Javascript/Node.js
Created website to facilitate easier hiring, doubling the hiring rate, HTML and CSS
Made a tool to help analyze spending habits of customers, Node.js and CSS
 - **Undergraduate Research, Carnegie Mellon University** 2014-2015
Next Generation Read Mappers for Ultra-Efficient DNA Sequencing Analysis
Use dynamic programming to create a next generation DNA mapper up to 40x faster than current generation DNA mappers, programmed in C++
 - **Software Engineering Intern, Baosteel Group Finance, Co., Ltd** 2014
Analyzed the efficiency of business intelligence tools such as IBM Cognos
Programmed a user interface using Java, MySQL, and XML to access, read, write, and alter their financial database
 - **Research Intern, National Cancer Institute, National Institutes of Health** 2012-2013
Researched Bcl-2, an essential, ubiquitous protein, and implicated Bcl-2 in mutagenesis (carcinogenesis) by demonstrating Bcl-2 mutations altered function.
Researched possible future cancer therapy using small molecule inhibition of Bcl-2 Lysine Dimethylation in the BH4 Domain of Bcl-2 and its Functional Significance, Published in The Journal of Immunology
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Projects

- **OneShotGG:** A java app/website pair which uses machine learning, computer vision, Tesseract optical character recognition technology, and a live Firebase database to enhance and automate advanced calculations in League of Legends
 - **Carnegie Mellon Robotics Club:** Currently working on Mobot project. The objective is to create and program a robot which can autonomously traverse a slalom type course in the least amount of time. Programmed in C++
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Education

- **School of Computer Science** Present
Carnegie Mellon University, Pittsburgh, PA
Computer Science Major, Robotics and Machine Learning Minor
 - **Science, Mathematics, and Computer Science Magnet Program** 2010-2014
Montgomery Blair High School, Montgomery County, MD
GPA: 3.94/4.0
ACT Composite Score: 36
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Skills

- **Java**
- **Javascript/Node.js**
- **C/C++**
- **Python**
- **HTML/CSS**
- **SML**
- Object-Oriented Programming
- Algorithms and Data Structures
- Functional Programming
- Machine Learning