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## Joseph McCarey

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## PROFILE

Broadly skilled full-stack engineer and product designer, with a bachelors in computer science from Harvard. Proven track record for finding creative solutions, writing thorough documentation, and rapidly learning new skills and technologies. Strengths include restless, results driven work ethic, attention to detail, and the ability to create and implement flexible long term strategy. A longer profile and project portfolio are available at mccarey.net.

## EDUCATION

**Harvard University**                                                                                                  Cambridge, MA
*AB in Computer Science, Citation in Mandarin.*                                          *Sept. 2019 – May 2023*
**Courses in Computer Science**: Artificial Intelligence, Computation Abstraction & Design, Data Structures & Algorithms, Independent Research (on Machine Learning), Systems Programming, and Theoretical Computer Science.
**Courses in Mathematics**: Differential Equations, Linear Algebra, Multi-variable Calculus, and Probability.

**Lane Tech College Prep**                                                                                                  Chicago, IL
*Computer Science Concentration, SAT I percentiles: Math:* $99^{\text{th}}$ *English:* $99^{\text{th}}$                     *Sept. 2015 − June 2019*
Chicago Engineers Foundation Scholar. FIRST Robotics Competition regional champion.

## SKILLS

**Programming**: AHK, C, C#, C++, Go, Google App Script, Java, JavaScript, OCaml, PHP, Python, Rust, and VBA.
**Operations**: Bash, Batch, Docker, Git, GNU Binutils, Gradle, Jupyter, Maven, Selenium, and SQL.
**Languages**: Chinese (Harvard Citation), English (Native), and Italian (Limited Proficiency).
**Design**: CSS, HTML, Illustrator, InDesign, OnShape, Photoshop, SolidWorks, and XD.
**Cloud**: Compute Engine, Elastic Compute, Firebase, Heroku Dynos, and Lambda.

## EXPERIENCE

**Self Employed**                                                                                                                Remote
*Freelancer*                                                                                                        *June 2020 − Jan. 2024*
- Creating automation tools and plastic goods focused on improving quality of life for workers in various professions.
- Offering cloud based automation services for e-commerce, affiliate marketing, and other online businesses.

**Learning, Innovation and Technology Lab**                                                            Cambridge, MA
*Research Assistant*                                                                                          *Sept. 2021 − Jan. 2022*
- Conducted research on education success metrics and how to extract them from different data modalities.
- Created a containerized toolkit to collect, analyze, and visualize multi-modal data using computer vision.

**Beyond Design Inc**                                                                                                        Chicago, IL
*Engineering Intern*                                                                                          *June 2019 − Sept. 2019*
- Conceptualized and iteratively designed product solutions with mechanical, electrical, and software components.
- Researched competing products to identify problem areas and understand the potential life cycle of the product.

**Array of Things**                                                                                                              Remote
*Intern*                                                                                                              *July 2019 − Dec. 2019*
- Developed data pre-processing tools for an open data project monitoring urban environment across Chicago.
- Created info-graphics about air quality in Chicago's neighborhoods using data from various chemical sensors.

## LEADERSHIP

**Harvard Undergraduate Robotics Club**                                                              Cambridge, MA
*Project Manager*                                                                                          *Sept. 2020 − Sept. 2021*
- Coordinated teams developing a robotic version of the game Pac-Man for the club's recurring Pac-Bot Competition.

*Game and Server Lead*                                                                                    *Sept. 2019 − Sept. 2020*
- Analyzed the existing code base and Pac-Man source code to align the game engine with arcade specifications.
- Updated and optimized legacy, language neutral net code using Google Protocol Buffers and Python Asyncio.

**Google Developer Student Club**                                                                          Cambridge, MA
*Chapter Lead, Founder*                                                                                    *Sept. 2019 − Dec. 2019*
- Trained with Google developers on practical cloud computing skills and how to effectively teach them to others.