

# ESTEBAN CHARRY

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## EDUCATION

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**University of California, Berkeley**  
Bachelor of Arts in Data Science

**Fall 2020 - Fall 2023**

## RELEVANT COURSEWORK

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Structure and Interpretation of Computer Programs, Data Structures, Efficient Algorithms and Intractable Problems, Discrete Mathematics and Probability Theory, Designing Information Devices & Systems, Multivariable Calculus, Statistics, Probability and Random Processes

## WORK EXPERIENCE

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**Instructor — ImmersivEducation**

**June 2019**

- Led a session of 40 students through the fundamentals of game development and programming.
- Taught basic design principles to algorithms in creating efficient and dynamic gameplay elements.
- Implemented designs through C# in Unity engine.
- Drafted course plans and collaborated with a team of instructors to designate topic areas.

## PROJECTS

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**Gitlet – Java**

**March 2021**

Git-like command-line version control system for archiving directories, restoring files or commits, viewing histories, sequencing commits, and merging branches.

**2D Tile World Engine – Java**

**April 2021**

Engine for generating and exploring random worlds using A\* search for path connections and a product development cycle with testing.

**Voice Controlled Car – Arduino**

**March 2022**

A voice-activated car using a Texas Instruments microcontroller and microphone to record and filter commands. The car identifies commands using singular value decomposition and principal component analysis.

**Pocket Planets – Python**

**October 2022**

Particle System simulating evolving agents in diverse ecosystems, with terrains generated using Perlin noise and agent behavior driven by probabilistic algorithms.

**AI Pac-Man – Python**

**January 2023**

Pac-Man project using AI techniques like informed state-space search, probabilistic inference, and reinforcement learning, including DFS, BFS, A\*, propositional logic, minimax and expectimax search, and Bayesian inference algorithms, Bellman updates.

## SKILLS

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**Languages:** English, Spanish (Native/Bilingual), Korean (Elementary)

**Computing, Tools:** Python (Advanced), Java (Proficient), SQL, HTML5 & CSS, PyTorch, Pandas, NumPy, Machine Learning

## CERTIFICATIONS AND AWARDS

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- Microsoft Technology Associate
- Solar Cup 2020 Eco-Boating Competition
- Great Minds in STEM 2020 Scholar
- 2020 Chevron Scholarship Recipient