

# Joseph Bae

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## EDUCATION

### San Francisco State University

San Francisco, United States

*Bachelor of Science in Computer Science; GPA: 3.6/4.0*

*Aug. 2022 – May 2026*

- Coursework: Analysis of Algorithms, Data Structures, Software Development, Machine Structures, Web Development, Programming Methodology

### Chung-Ang University

Seoul, South Korea

*Study Abroad, Bachelor of Science in Computer Science*

*Feb. 2024 - July 2024*

- Coursework: Probability and Statistics with Computing, Linear Algebra, Data Mining

## EXPERIENCE

### AI-STAARS

Jun. 2023 – Dec. 2023

*San Francisco State University · Internship*

*San Francisco Bay Area · Hybrid*

- Selected for an elite internship program reserved for the top 1% of students in the Class of 2026, gaining specialized expertise in machine learning and artificial intelligence
- Implemented cutting-edge ML techniques including transfer learning and ensemble methods, reducing model training time by 30% while maintaining high accuracy

## PROJECTS

### Retro Pokemon | *Unity, C#*

Nov. 2024 – Dec. 2024

- Developed a fully functional turn-based battle system in Unity, implementing attack mechanics, health management, and dynamic UI updates
- Designed and programmed comprehensive player and NPC controllers enabling interactions, scripted movement, and event triggers
- Implemented state machines to manage different battle states including move selection, attack animations, and victory/defeat conditions

### Brain Cancer ML Project | *Machine Learning, Python*

Nov. 2023

- Led a team of 4 developers to create a machine learning model analyzing brain cancer MRI datasets, achieving a 99% diagnostic accuracy rate
- Allocated development roles based on team strengths, established project milestones, and coordinated code reviews to ensure high-quality implementation

### Windows File Automation | *Python, Watchdog*

2023

- Implemented real-time file monitoring and organization using Python's Watchdog library, reducing manual sorting by 80%
- Developed custom rule-based algorithms to automatically categorize files based on type, content, and naming patterns

## TECHNICAL SKILLS

**Programming Languages:** Python, Java, JavaScript, C++, C#, Assembly, MySQL, HTML/CSS

**Technologies & Tools:** Git, GitHub, Netlify, Unity, Flask, Watchdog, Raspberry Pi, Google Cloud, OpenAI, Llama (Meta AI), PyTorch, Scikit-learn, Pandas, Numpy, Linux/Unix, Figma

**Areas of Expertise:** AI/ML Development, Data Science, Front-end Development, Back-end Development, Project Management, Data Structures, Algorithms, Software Architecture, Web Development, Database Management, Neural Networks

**Languages:** English (Native/Fluent), Korean (Native/Fluent)

## ADDITIONAL INFORMATION

**Club Involvement:** Vice President of Robotics Club, Captain of Badminton team, Member of ACM Club, Cybersecurity Club, and Data Science Society

**Awards & Achievements:** AI-STAARS \$10,000 Scholarship, SF Hacks Engineering Prize Winner (\$1500), Highest Honors (Fairfield-Suisun USD), Honor Roll (4 years), Scholar Athlete Award, 4.5 GPA (top 3% of class)