Joseph Mathew Sagum

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EDUCATION

California State University, Sacramento   **Sacramento, CA**
Bachelor of Science, Computer Science, *Graduating in Spring 2026*   Cumulative GPA 3.6

RELEVANT COURSES

Data Structures || Object Oriented Programming || Data Oriented Programming || Software Engineering || Database Management Systems || Computer Organization || Graphics Programming || Probability and Statistics

WORK EXPERIENCE

BMJ Garcia Care Home   **Roseville, CA**
IT Support Assistant   2022 - 2025
- Upgraded 8 outdated workstations across 4 care home facilities and supported the owner's personal technology setup, improving overall operational efficiency and technical reliability
- Resolved approximately 10-15 technical issues per week, providing timely support for hardware, software, and connectivity problems across multiple locations
- Consulted with staff and trained some coworkers on file management, digital organization, and basic tech workflows, improving file preservation and day-to-day efficiency across all home computers

PROJECTS

- **Java Minesweeper Project -** *game emphasizing OOP and openGL implementation*
  - Developed a fully functional Minesweeper game in Java using object-oriented and data-oriented design
  - Engineered a dynamic grid system using triangle rendering logic and image-mapping for tile visuals
  - Implemented a centralized conduit system to decouple input handling and game state updates
  - Applied abstraction and singleton patterns to structure core systems like input, tile behavior, and state transitions
  - Managed recursive tile reveals, flag toggling, and win/loss conditions with efficient logic
- **NISC CPU (Logisim)-** *A 12-bit custom CPU designed in Logisim*
  - Designed and implemented a 12-bit CPU using logisim, featuring a 12-bit ALU, 8x12 register file, and instruction decode logic.
  - Supported multiple instruction formats: 3-operand (ADD, SUB, AND, OR), immediate (MOVC), 2-operand (NOT, LSL, LSR, ASR), and branching (BNZ)
  - Loaded and executed custom assembly test programs through ROM to validate CPU behavior

- **Java Social Media App "Hornet Hub" -** *A group project using Scrum Methodologies*
  - Collaborated with a team of 4 developers in a SCRUM-based workflow to build a desktop social media platform for CSUS students.
  - Led design and implementation of main feed UI, integrating user-generateed posts
  - Participated in sprint planning, daily scrum, and used GitHub version control for smooth team collaboration.

SKILLS

- **Programming Languages:** Java, Javascript, Python, C, SQL, HTML/CSS
- **Platforms:** Windows, Linux
- **Tools & Frameworks:** Git/GitHub, OpenGL, GLFW, SceneBuilder, Office 365
- **Languages:** Fluent in English and Tagalog