Ayra Babar

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EDUCATION

San Francisco State University   San Francisco, CA
Bachelor of Science in Computer Science | GPA: 3.91   **Expected 05/2027**

RELEVANT COURSEWORK

Programming Methodology   **01/2025 – 05/2025**
- Developed a cache manager in C++ using advanced data structures, applying modular design principles to improve efficiency and scalability
- Applied modular design, debugging, and testing techniques to strengthen problem-solving and reinforce software engineering principles

Data Structures   **08/2024 – 12/2024**
- Implemented linear and non-linear data structures (lists, stacks, queues, trees, graphs) in Java to efficiently solve computational problems and reinforce algorithmic thinking
- Evaluated algorithm performance by applying Big-O notation, identifying trade-offs between time and space complexity to guide problem-solving approaches
- Developed hash tables and search structures to optimize data retrieval, applying them in a task management system that improved organization and access speed

PROJECTS

The Norwegian Cultural Hub Website (HTML, CSS, JS)   **03/2025 – Present**
- Designed and deployed a fully responsive cultural website with interactive features and modern UI/UX styling
- Integrated multimedia content and intuitive navigation to increase user engagement and accessibility

Cache Manager (C++)   **01/2025 – 05/2025**
- Developed a cache system integrating a hash table for O(1) access, a doubly linked list for LRU eviction, and a BST for ordered range queries

Task Management System (Java)   **08/2024 – 12/2024**
- Implemented advanced data structures using Java to handle task prioritization and performance analytics

SKILLS

- **Technologies:** C++, Java, JavaScript, and HTML with a focus on writing clean, high-quality code
- Microsoft Office Suite (Word, Excel, PowerPoint, Outlook), Google Workspace (Google Docs, Sheets, Slides, Gmail, Google Drive), Zoom
- **Languages:** Conversational in Spanish and Norwegian

WORK EXPERIENCE

Private Household / Family Care   Oslo, Norway
Personal Caregiver   **05/2022 – 04/2023**
- Provided daily care and companionship for an elderly couple, fostering emotional well-being
- Assisted with household tasks, meal preparation, and errands while adapting to a new cultural environment

Self-Employed   Tracy, CA
Private Tutor   **08/2017 – 05/2022**
- Tutored K–9 students in Math, Language Arts, History, tailoring lessons to individual learning styles
- Supported academic growth by reinforcing foundational concepts, assisting with homework, and challenging advanced learners to exceed grade-level expectations