Genesis Anne C. Villar

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Education

San Diego, California **San Diego State University** **Anticipated Graduation: Aug 2025**

- B.S. Degree in Computer Science w/ Engineering Minor – graduated with *Cum Laude Honors*
- Cumulative GPA: 3.627 on a 4.0 scale

Las Vegas, Nevada **Northwest Career and Technical Academy** **Aug 2014 – May 2019**

- Program Area: Civil Engineering
- Cumulative GPA: 3.977 on a 4.0 scale – Class Rank: 10 out of 420 students

Technical Skills

Programming: *Python*, *MATLab*, *C/C++*, *Assembly/MIPS*, *Java/Javascript*, *R*, *Haskell*, *Prolog, and Solidity*
Frameworks & Tools: *React.js, HTML/CSS, Flask, ethers.js, PyTorch*
Specializations: Machine learning *(Deep Q-Learning, Reinforcement Learning, and Neural Networks),* Cloud Computing *–AWS (EC2 analytics),* IoT systems*, Wi-Fi/BLE protocols, Blockchain/Smart contracts, Web3 development, testnet deployment*
Engineering drafting tools: *Autodesk AutoCAD/Revit/Inventor 2015+, SOLIDWORKS 2015 +*

- Soldering/building and programming various robots/electronics (*Arduino*)

Professional Experience

STEM/Coding After-School Instructor **CodeAdvantage** **Feb 2025 - Present**

- Deliver engaging after-school STEM classes for K-8 students, guiding them on hands-on projects– focusing on coding, LEGO® robotics, and game design
- Create a fun and inclusive learning environment that encourages creativity, critical thinking, and teamwork

Crew Member **Trader Joe's (San Diego State University)** **Jan 2022 - Present**

- Trained new employees, managed inventory and product ordering, and handled delivery distributions for daily operations
- Ensured excellent customer service through proactive interaction and merchandising on the sales floor.

Research Assistant **San Diego State University** **July 2021 - Aug 2021**

- Analyzed biological signal data including heart rate (HR), diastolic blood pressure (DBP), and muscle sympathetic nerve activity (MSNA) taken from patients using non-invasive methods
- Utilized statistical learning methods in MATLAB to create probabilistic models and demonstrate the likelihood of MSNA bursts based on predictor variables – developed automation scripts for data validation and accuracy assessment

Projects

Blockchain Connect4 Game **(May 2025)**
(link: https://github.com/genuhhsis/CS596_Blockchain_Final_Project)

- Built fully decentralized Connect4 game using Solidity smart contracts deployed on MegaETH testnet
- Developed React.js frontend with ethers.js integration for seamless Web3 wallet connectivity
- Implemented trustless gaming mechanics including player matchmaking, move validation, and timeout systems

Snake Game AI with Deep Q-Learning **(March 2025)**
(link: https://github.com/msmith6127/SnakeGameAI)

- Implemented Deep Q-Network (DQN) reinforcement learning agent using PyTorch to master Snake gameplay – achieved 11.6% improvement in mean score through systematic reward structure optimization and experience replay
- Designed 11-dimensional binary state representation for efficient neural network processing

Door the Explorer - Smart Door Alert System **(Feburary 2025 - May 2025)**
(link: https://github.com/stevengervacio/CS-596-IOT-FINALPROJECT)

- Developed an affordable, intelligent IoT-based security solution using sensor fusion (LiDAR, accelerometer, light sensor)
- Built cloud infrastructure using AWS EC2 for data analytics, visualization dashboard, and email notifications
- Integrated Wi-Fi and BLE connectivity for remote monitoring and control via TTGO ESP32 microcontroller

Java Coffee Ordering System **(August 2023 - December 2023)**
(link: https://github.com/genuhhsis/CS160LAB_JavaCo)

- Engineered a Java-based coffee ordering interface for a university project, utilizing object-oriented programming principles to facilitate order management and inventory tracking.
- Developed features for adding and updating orders, reloading inventory, and maintaining transaction logs, incorporating exception handling to ensure robust system performance under diverse user inputs.

Accolades & Extracurricular

- *2017/2018 AIA Top Honor HS Design Award Winner*
- **SDSU College of Engineering Dean List Honoree:** 2019, 2020, 2023
- Mentored by a former *NASA* and *Blue Origins* engineer, now a CEO in data analytics and medical ads, providing sponsorship, regular seminars, and professional guidance

STEMAdvantage **2023 - Present**
SDSU Cannaclub **2023 - Present**

- Club Executive Committee - *Director of Education*
- Lead an organization dedicated to cannabis education, advocacy, and industry engagement

SDSU Quantum Computing **2023 - 2024**

- Helped create Python programs related to exploring aspects of quantum computing

SDSU Mathematics Engineering Science Achievement (MESA) **2019 - Present**

- MESA Director List awardee – 2020, 2021, 2025
- Qualcomm Scholarship Awardee – 2021
- Volunteered in various club activities – guest speaker, a volunteer organizer