Jared De Los Santos

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EDUCATION

B.S. Computer Science **Graduation Date:** May 2023
California State University, Fullerton

PROJECTS

AI COACH FOR VIDEO GAMES | Research Project | Research Paper **August 2022 - Present**

- Pose and solve challenging questions relating a user to their video game of choice.
- Using game API's, develop a Data ETL pipeline, processing millions of observations to generate useful insights.
- Develop and evaluate statistical models including Decision Trees, Logistic Regression, Random Forests, and Neural Networks.
- Transform our model outputs into actionable feedback for a user.

TDM, DISCORD BOT | Multi-purpose bot | discord.py **August 2022 - December 2022**

- Designed and implemented a data-driven system utilizing Riot's API and data visualization tools (e.g. Matplotlib, Pandas) to track and display player statistics in a user-friendly manner.
- Enhanced the user experience by integrating the youtube-dl library and ffmpeg to enable music playback in voice channels.
- Contributed to the creation of utility features, such as server moderation tools, logging functionality, and polls, to improve the organization and welcoming nature of Discord servers.
- Developed engaging mini-games to increase user interaction and provide entertainment for the community.

SPACE INVADERS | Retro game remake | Pygame | Aseprite **September 2022**

- Demonstrated proficiency in graphics programming, including the ability to code sprites and animations (e.g. for ships, aliens, and death sequences) using tools such as Aseprite.
- Adhered to project guidelines and actively sought feedback from instructors to ensure understanding of course material.
- Utilized the Pillow Python Imaging Library to design and implement barriers that protect the ship from alien lasers.

PACMAN | Retro game remake | Pygame | Aseprite **October 2022**

- Designed and implemented animations for Pac-Man, ghosts, and death sequences using Aseprite.
- Implemented algorithms to guide the ghosts' AI in chasing Pac-Man.
- Utilized graphs to enable efficient traversal through the maze.

CROSSY ROAD | 3D game remake | Unreal Engine 5 | Blueprints | MagicaVoxel **September 2022 - December 2022**

- Developed a system capable of generating endless terrain for players to explore within the game.
- Utilized MagicaVoxel and Blender to create and export models (e.g. terrain, obstacles, player) for use in Unreal Engine 5.
- Utilized Blueprints for game logic and implemented no manual optimizations in C++ code.

SKILLS

Machine Learning: TensorFlow, Keras, Scikit-learn

Data Science: Pandas, NumPy, SciPy, Matplotlib, Seaborn

Languages: Python, C/C++, C#, R, SQL

Technology: Git, Jupyter, LaTeX, Googling