Khanh Nguyen

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Education

Digipen Institute of Technology — Redmond, WA
Bachelor of Science in Computer Science in Machine Learning — *Aug. 2023 – Present*

- Honors and Awards: Merit Scholarship Recipient

Bellevue College — Bellevue, WA
Associate's in Science — *Dec. 2019 – June 2022*

Projects

Stock Trend Prediction Model | *Python, Machine Learning* — Sep 2024 – Present

- Developing a machine learning model to predict stock trends using seven years of historical financial data.
- Utilized libraries such as `pandas`, `NumPy`, `scikit-learn`, and `Matplotlib` for data preprocessing, feature engineering, and visualization.
- Engineered features like RSI, EMA, volatility, and other technical indicators to enhance model performance and reduce overfitting.
- Experimented with multiple machine learning models, including `Lasso Regression`, `Random Forest Classifier`, and `Random Forest Regressor`, to identify the best performing model for trend prediction.
- Implemented time-series cross-validation using `TimeSeriesSplit` to ensure robust evaluation and prevent data leakage.
- Analyzed model performance metrics (e.g., MSRE, R-squared) to fine-tune hyperparameters and improve predictive power.

Shifter | *C, C++* — Feb 2024 – Aug 2024

- Published on Steam, making it available to a global audience | Steam Page
- Game Development: Developed a 2D platformer game with a team of three where the player navigates through portals to solve puzzles.
- Engine Implementation: Designed and implemented core engine elements, including a sound system, settings menu, and progress-saving system.
- User Interface Design: Create intuitive user interfaces for menus, allowing seamless navigation and interaction.
- Graphics Optimization: Implemented settings options allowing players to adjust graphic presets for optimal performance.
- Problem Solving: Addressed bugs and provided solutions to optimize the gameplay experience, resolved team issues by facilitating communication and deescalation, ensuring project milestones were met.

Sky Slinger | *C, C++* — Aug 2023 – Jan 2024

- Game Development: Developed a 2D platformer game with a team of five featuring a unique grappling mechanic for player traversal, leveraging game engine capabilities.
- Game Design: Implemented player controls, level design, and animation systems to enhance gameplay dynamics and game mechanics
- User Interface Design: Designed intuitive user interfaces for menus, level selection, and in-game heads-up display (HUD), incorporating features to enhance player experience.
- Problem Solving: Resolved issues within the application, addressing bugs and optimizing game mechanics for seamless gameplay.

Caro - Five in a Roll | *Python* — Aug 2023 – Present

- Game Development: Developing a Tic Tac Toe game using Q-Learning, providing an intelligent AI opponent for enhanced user engagement.
- Game Design: Implemented a graphical user interface (GUI) to facilitate user interaction, enhancing the gaming experience.
- Programming: Using object-oriented programming principles to design modular and extensible code, ensuring flexibility and scalability.
- Problem Solving: Demonstrated proficiency in algorithm design, game development, and problem solving skills to create a challenging and competitive gaming environment.

Technical Skills

- **Programming Languages:** Java, Python, C/C++, SQL.
- **Game Development:** Unity
- **Developer Tools:** Git, Visual Studio, VS, IntelliJ, Eclipse, JupyterLab.
- **Libraries:** pandas, NumPy, Matplotlib, Seaborn, DGL, CProcessing, Scikit-Learn,
- **Knowledge:** Object-Oriented Programming (OOP) principles, Data Structures and Algorithms, Web Development (HTML/CSS, JavaScript),Version Control Systems (Git), WSL, 3D Printing Slicer(Creality Slice, PrusaSlice, Bambu Studio).

Relevant Coursework

- Game Design and Development in C/C++, Unity
- Programming courses covering Java, Python, C, and C++
- Data Analysis, Database with WSL