

NATHANEL GRIES

nategries1@gmail.com | (424) 383-0503 | github.com/NateGries1 | linkedin.com/in/nathanel-gries

EDUCATION

California State University, Fullerton	Expected: May 2025	GPA: 3.6
Key Classes Completed: Operating Systems, Compilers and Languages, Algorithm Engineering, Game Design, Artificial Intelligence, Computer Organization and Assembly Language, Data Structures, Software Engineering		

EXPERIENCE

Supplemental Instructor — CSUF	Aug 2023 - Dec 2023
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- **Taught Calculus Workshops:** Designed and led interactive, semiweekly workshops to teach calculus concepts, contributing to an average grade improvement of over 10% among participating students.
- **Monitored Instruction:** Evaluated and analyzed students' progress to ensure effective learning outcomes.

Data Science Research Intern — CIC PCUBED	Jun 2023 - Aug 2023
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- **Evaluated Model Performance:** Tested various ML predictive models using Scikit-learn, Pandas, Xgboost and TensorFlow to compare their performance and accuracy using varying datasets, resulting in a comprehensive understanding of the benefits and drawbacks of each predictive model.
- **Designed Practical Predictive Model:** Created a machine learning model using a random forest to predict course performance for university students, resulting in an accuracy of 95% and an MAE of under 3% and producing a practical and effective tool for studying and improving academic success.

PROJECTS

LC Pilot <https://github.com/NateGries1/lcpilot>

- Developed a LeetCode-inspired platform using Next.js and Firebase, implementing a custom-built text editor to enable real-time code writing and execution.
- Integrated an AI-powered Hint Bot, leveraging Gemini API and clever prompt engineering to offer tailored hints and guidance based on users' current code and problem description.

Wikiguess <https://github.com/NateGries1/WikiGuess>

- Collaborated with a team of four to develop a hackathon-winning single-player game within 24 hours, leveraging Wikipedia and ChatGPT APIs.
- Contributed to frontend development to deliver an interactive gameplay experience, where players challenge themselves to distinguish between articles generated by Wikipedia and ChatGPT.

Sun's Edge https://store.steampowered.com/app/2174210/Suns_Edge/

- **World Partition:** Leveraged Unreal Engine 5 to apply World Partitioning, resulting in a substantial 45% reduction in map loading time and a 30% drop in latency, leading to a remarkable boost in game performance and graphics capabilities.

LEADERSHIP

Algo Team Lead — Association of Computing Machinery at CSUF	May 2023 - Current
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- Delegated workshop topics and slide preparation to team members for hosting weekly Data Structures and Algorithms (DSA) workshops and biweekly Advanced Algorithms sessions.
- Organized and led weekly study sessions for the International Collegiate Programming Contest (ICPC), providing students with targeted preparation for competitive programming challenges.

SKILLS

Programming Languages: C++, Python, JavaScript, TypeScript, C#, HTML/CSS, SQL

Technologies: React, Next.js, Node.js, SvelteKit, Flask, TailwindCSS, TensorFlow, REST APIs

Tools: Git/Github, Unity, Unreal Engine 5, Firebase, WSL Linux, Anaconda, XCode, Supabase, Figma