SEHADATULLAH ATAL

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Highly motivated and results-driven programmer. Adept at both solo and collaborative projects. Possessing strong technical skills in C#, C++,C, Python, JavaScript, Unity, and Unreal Engine, combined with hands-on experience in programming software and games. Known for excellent problem-solving abilities, and a commitment to continuous learning and professional growth

EDUCATION

University of California Santa Cruz, *BS in Computer Science: Game Design* | California, USA   June 2024

Courses: Artificial Intelligence | Data Structures and Algorithms | Advanced Programming | Game Production Studio | Comp Systems and C Programming | Programming Abstraction Python | Game Systems | Linear Algebra

EXPERIENCE

Web Developer – Lifting Humanity, California, USA)   Jan 2023 - May 2024
- Developed and implemented an inventory management system using **databases and dynamic visual tables**, streamlining inventory tracking and organization.
- Designed and integrated **secure employee login portals** with encrypted credentials for enhanced system security and user management.
- Optimized **front-end and back-end performance**, improving page load times and system scalability using **JavaScript, HTML, CSS, and SQL.**
- Implemented **RESTful APIs** to connect various system components, improving **data flow and accessibility** across the platform.

Research, *Research Assistant: Data Handler* | UCSC, Santa Cruz, California, USA)   Jan 2023 - May 2023
- Tested GPU weak memory models and evaluated shared memory consistency behavior on NVIDIA GPUs
- Spearheaded the **data gathering and data analysis** efforts within the research group, leveraging Python scripts to automate data collection and processing tasks.
- **Debugged and optimized scripts** for data visualization, producing comprehensive three-dimensional graphs, highlighting inconsistencies, and bugs allowing for **performance improvement and contributing to a 300 percent increase in model efficiency**.

SKILLS

Languages	C/C++	C#	Python	Java	CMake	Bash	HTML	CSS	SQL
Game Systems and Design	Multiplayer	Procedural Animation	Procedural Generation	Finite State Machines	Path-Finding
Engines	Unity	Unreal
Software	Linux	VS	VS Code	Vim	Docker	Github	Blender	Photoshop	Substance Painter
Other	Git	Miro	Trello	3D Math

PROJECTS

Published 3D Multiplayer Steam Game – *Steam | 3D | Unity | Multiplayer*   Jan 2024 - June 2024
- Solo Developer (Programming, Game Design, Audio Design, Model Design, etc).
- **Multiplayer** - Peer to Peer using Fishnet Networking Solution
- **Procedurally Generated Animations** - Inverse Kinematics
- **Physics** - simulations and controllers
- **Artificial Intelligence** - Finite State Machines
- **Procedural Generation** - A* Path Finding, 3D Dungeon Generator
- **370 Steam Wishlists**

Multi Threaded (24 CPU, 4 PC) Password Cracker – *C++ | Berkley Sockets| UDP*   Nov 2023 - Nov 2024
- Networked - Berkeley Sockets, UDP Protocol
- **Architecture** - Master-Slave Model, Multi-Threading,
- Task Management - Task Distribution, Progress Updates, Result Reporting
- **Data Structures and Synchronization** - Thread Pool, Work Queue, Synchronization Mechanisms
- Optimization - Thread Pooling, Work Queue Management

Pac-Man projects – *Various AI techniques to solve game-playing challenges within the classic Pacman game | Python| Optimization*   Jan 2023 - March 2023
- **Search Algorithms** - DFS, BFS, UCS, A*
- Adversarial Search - Minimax Algorithm, Alpha-Beta Pruning
- Probabilistic Inference - Bayesian Networks, Particle Filters
- **Reinforcement Learning** - Q-Learning, Approximate Q-Learning, Value Iteration
- Heuristics - Manhattan Distance, Admissible Heuristics
- Game-Specific Strategies - Evaluation Functions, Feature Extraction