Joshua Patino

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Education

Bradley University, Peoria IL; Graduation Date: June 2022 BS in Computer Science

Relevant Coursework

- **Advanced Data Structures and Algorithms**: Covered graph algorithms, dynamic programming, and advanced data structures to solve complex algorithm problems.
- **Game Design**: Focused on game mechanics, player psychology, and narrative design, while developing skills in project management, teamwork, and creative problem-solving.
- **Database and Management Systems**: Taught database design and management principles, SQL programming, and optimization techniques.
- **Introduction to Software Engineering**: Provided an overview of the software development process, including requirements analysis, design, implementation, testing, and maintenance, while developing skills in project management, communication, and collaboration.

Projects

Portfolio Website, Click to visit: https://josh-patino.github.io/

Counting Seals, Senior Research Project
- Developed an ML-based seal counting and classification system using Python and OpenCV
- Improved image processing speed by around 30% with a stitching algorithm
- Debugged UI issues using Visual Basic

Run Forest Run!, Final Game Design Project
- Brainstormed a health-incentive infinite runner based game with a team
- Used C# in Unity, created a lane checking algorithm to prevent item spawning collisions
- Worked with a team of 4, with weekly sprint retrospectives and debugging meetings

Social Media-Like Database server with a UI
- Created a PHP-based database server with 10 tables and nearly 40 entities using SQL Workbench,
- Designed an ERD with table and attribute information and generated SQL queries
- Built a UI using JavaScript, CSS, and HTML, with 3 separate import processes using the ETL process

Personal Project: Retro Snake 2D Game
- Developed a simple retro game using C++ and the SDL library
- Implemented basic game mechanics, including player movement, collision detection, and scoring
- Designed and implemented graphics and sound effects using SDL Mixer
- Demonstrated proficiency in programming concepts such as functions, C++ containers, and effective memory management

Skills

Programming Languages: C/C++, C#, Python, Java, SQL, PHP, HTML, CSS, VB, JS
Software: macOS, Windows 10, Git, Command Line, WireShark, SQL WB, Unity, Spring, Angular
Office Efficiency Products: Full suite on macOS, Microsoft Word, Excel, and PowerPoint
Spoken Languages: Bilingual in English and Spanish
Relevant Hobbies: C++ SDL2 projects, Angular15 web projects

Experience

Software Engineer, TCS, August 2022 to December 2022
- Created full-stack demo apps, like a Scheduler using Spring Boot, REST APIs, JPA/Hibernate
- Utilized Java, SQL, and Git version control in an Agile-based team environment
- Familiarity with front-end technologies such as HTML, CSS, and JavaScript
- Knowledge of agile development methodologies and software design pattern

Tutor at iD Tech, May 2021 to September 2021
- Tutored students aged 9-17 in various programming languages and concepts
- Developed personalized lesson plans with specific goals and skills for each session
- Maintained a fun and engaging learning environment

Activities/Awards

- Dean's List (Spring 2020, Spring 2022)
- Fish and Loaves Volunteer, 2018-2020