Jason Pyke

jasonpyke.me
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EDUCATION

Bachelor of Science in Informatics | University of Washington - Seattle   Sep. 2018 - Dec. 2022
Focus Area: Software Development (in-major GPA: 3.91)

Programming Coursework:	*Data Structures & Algorithms, Systems Programming, Computer Vision & Artificial Intelligence, Machine Learning*
Informatics Coursework:	*Full-Stack Web Development, Software Architecture, Mobile Application Development, Database Design & Management, Design Methods, Ethics & Policy*

EMPLOYMENT

Software Engineer, Intern | Booz Allen Hamilton - Seattle, WA   July 2022 – Present
- Designed authoritative multiplayer game server architecture for a mixed reality wargaming application
- Improved framerate on HoloLens by 43% through computation offloading and algorithm optimization, as well as implementing an object pooling system and reducing memory allocations
- Reduced network traffic by 76% by implementing allocation-free message encoding and decoding
- Leveraged knowledge in client/server architecture, UDP/TCP and Transport Layer Security, programmed in C# and debugged using Visual Studio, Unity Profiler, and HoloLens debug interface

Software Developer, Student Researcher | Seattle Children's – Seattle, WA   Jan. 2021 – June 2022
- Created and validated a patent-pending automated image screening algorithm for arthritis with 95.5% accuracy to a technician assisted method using OpenCV and Human Pose Estimation
- Established containerized remote testing and development on HPC system using Docker and bash scripts
- Utilized Flutter and Dart to implement photo capture and upload pages for the screening algorithm
- Leveraged knowledge in Mobile Application Development and Computer Vision, programmed using Python and Dart, and debugged using Visual Studio Code

TECHNICAL PROJECTS

Personal Website: jasonpyke.me *(for additional information and projects)*

Mobile Game: Coalition – Multiplayer FPS   Jul. 2014 – Jun. 2021
- Created a real-time multiplayer video game using a client authoritative model with over 4 million downloads, leveraging multilingual support and a RESET API for dynamic content delivery
- Created a 'progression system' by tracking gameplay metrics and interfacing with Google's Play Games Services Management API to upload and cache user save data
- Utilized: C#, JavaScript, Node.js, Unity, Local Persistent Data, Cloud Storage, Caching, Json.NET

Mobile Game: Rampage Road   Dec. 2016 – Present
- Developed a revenue generating open-world Android game with over 7 million downloads
- Utilized the C# Jobs System to implement an efficient multithreaded A* pathfinding algorithm using a weighted graph and extrinsic priority queue
- Utilized: C#, Unity, Local Persistent Data, Cloud Storage, Caching, Json.NET

Resume Quest (resumequest.careers)   Dec. 2021 – Jun. 2022
- Developed an interactive resume tailoring tool using TypeScript for screening job listing descriptions
- Established a REST API for storing and fetching results, incorporated document-based persistent storage
- Utilized: Next.js, TypeScript, MongoDB

Flights Database Design & Implementation (github.com/pyke-jason/sql-flights)
- Developed and populated a database for an airline's flights database using stored and insert procedures, business rules, synthetic transactions, and complex queries
- Utilized: SQL, MS SQL Server 2019

SKILLS

Software: *(proficient):* C#, Python, C, Typescript, JavaScript, Java, SQL, Git *(familiar):* C++, HTML/CSS, Go, Dart, R