Max Petrushin

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EDUCATION

University of Central Florida   Orlando, FL
Bachelor of Science in Computer Science   *Aug 2022 – Dec 2024*

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Java, C++, C, SQL, GraphQL, HTML, CSS, Haskell, Kotlin, Swift, Bash
Frameworks: Node.js, Spring Boot, React, tRPC, gRPC, Next.js, Express, React Native, Tensorflow, Tailwind, Flask
Tools: GIT, Docker, AWS, Kafka, Redis, WebSockets, MongoDB, Cassandra, MySQL, Postgres, Figma, Postman

EXPERIENCE

Software Engineer   Sep 2024 – Dec 2024
COMPETE BePlayFuel   *Orlando, FL*
- Contributed to a Beta version release of the mobile application for user-facing iOS testing on TestFlight
- Resolved iOS build dependency errors by upgrading the mobile app to the latest React Native version
- Containerized the backend with Docker, wrote 50+ APIs interacting with a containerized MongoDB database
- Adjusted the AWS Cognito and S3 integration to be more secure and provide more user-friendly status messages
- Wrote code documentation, interviewed and onboarded intern developers, improved mobile user experience

Programming Instructor   Aug 2024 – Dec 2024
Knight Hacks   *Orlando, FL*
- Hosted a C programming memory allocation workshop attended by 20 in-person students and 150+ online viewers
- Conducted a Java Spring Boot development workshop viewed by 20 in-person and 120+ online viewers
- Built a Spring Boot service using Spring Core, Spring Web, and JPA/Hibernate as an example workshop web app
- Co-hosted 2 Algorithms and Data Structures workshops that were attended by 50 students in total

PROJECTS

AI-based Puppetry | *React, TypeScript, Tensorflow.js, Three.js, Flask, MediaPipe, Tailwind CSS*
- Made the final round of UCF Senior Design Showcase Competition
- Project-managed and developed an AI-based web app that controls 3D avatars in the browser
- Reviewed pull requests, hosted daily stand-ups, weekly sponsor meetings, and pair programming sessions
- Implemented automated data collection and neural network training pipeline on the frontend using Tensorflow
- Designed classification refinement, normalization, and noise cancellation algorithms

Qvault | *Spring Boot, Java, React, JPA/Hibernate, PostgreSQL, Docker, AWS S3*
- Built a smart PDF viewer web app that lets users write and search up notes easily with Spring Framework
- Wrote a separate JWT authentication microservice to achieve Object Oriented Programming modularity principle
- Implemented search notes from PDF feature using pdf-lib library and indexing notes by assigned pages
- Used core-UI library to give front-end a more accessible and user-friendly file-system look

VerticAl | *Python, OpenCV, MediaPipe*
- Built a CLI app that cuts 30-minute dunking videos and outputs multiple 2-second highlights
- Achieved cutting the video storage of 10GB/week and transitioned to a fully automated clip editing
- Created a gui selector tool that helps tune the parameter of rim location to optimize jump detection
- Utilized a heap/priority queue data structure to filter out less valuable highlights

RSO Event Calendar | *MySQL, React, TypeScript, Flask, HTML, CSS*
- Designed a MySQL database and a React web interface to manage college RSO event calendar
- Used advanced database design practices such as entity-relation diagrams, normalization, and assertions
- Created a Flask server and queried the database using pure SQL with mysql-connector for quicker performance

Contra4 Jungle Engine | *C++, SFML, imGui*
- Created a 2-d platformer game engine using SFML and designed a portion of the Jungle level of Contra4 on it
- Implemented animations, IO controls, projectile shooting, collision physics, enemy logic, and player health
- Utilized imGui to factor out game engine management options such as object spawning, intensity, and rate