

ZIYUE YANG

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yang-ziyue

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Portfolio

Technical Skills

Languages/Tools: C# · Golang · Python · JavaScript · Java · Git · Protobuf · Docker

AWS Services: Lambda · Amplify · ELB · EC2 · S3 · ECS Fargate · CloudFormation · SQS · EB

Web & Database: React · Express.js · Node.js · PostgreSQL · Flask · Django · MongoDB · REST API

Experience

IGG Canada

Junior Generalist Programmer

Oct 2023 - Present

Vancouver, Canada

- **Core Front-End Developer** for *Dawn of Survival* mobile game, specializing in UI system development for complex gameplay features within a large-scale codebase.
- **Led UI/UX optimization** across the game involving over 20 features, collaborating closely with artists, game designers, and the producer while delegating tasks to fellow front-end developers for visual and UX improvements.
- Developed back-end logic and APIs for over 10 key game features using Golang, including the technology tree, hero progression, gear systems, battle formation editing, world map mining, and auto zombie farming.
- Optimized game performance by minimizing tick-level operations and replacing redundant game objects with dynamic instantiation, leading to an 80% reduction in draw calls. Enhanced code structure and readability by refactoring logic into finite state machines (FSMs).
- Implemented and maintained data centers to parse server data and developed APIs for game features to access and utilize this data.
- Designed configuration frameworks to empower game designers in integrating and adjusting in-game configurations without requiring code changes.
- Wrote unit tests for server APIs and actively contributed to end-to-end testing in preparation for game releases.

Centivizer

May 2022 – Sept 2022

React Developer Intern

Toronto, Canada

- Core developer of *Emotional Mole*, a browser game designed to measure long-term care residents' reaction time.
- Refined the back-end API by optimizing routing in Express.js and designing new MySQL schema with referential integrity; fetching time was reduced from 120ms to 75ms; received positive feedback from end users.
- Implemented a user authentication system for game records, and created ranking leaderboards for various game modes.

Projects

ReadMe | MERN Stack, React, jQuery, Express.js, MongoDB, Node.js

Git Repo

- Implemented routing with *React Router DOM* and Express for the back-end to handle user authentication.
- Developed Ajax algorithms that allow users to explore new books, while keeping the application highly responsive.
- Designed admin panels, allowing privileged users to modify user status and book content.
- Introduced the author Kudos system, allowing readers to grant Kudos to their favored authors.
- Refined the MongoDB schema to facilitate full-text search functionalities based on author names and book keywords.

HHouse | AWS, Lambda, Serverless, AppSync, CI/CD

Git Repo

- Implemented a serverless e-commerce platform with various micro-services communicating over EventBridge.
- Configured AWS Lambda to perform serverless computing as an asynchronous event listener.
- Built DynamoDB database to preserve data, and configured CIAM for user management and authentication.
- Set up continuous deployment using CloudFormation, CDK, and CodePipeline.
- Designed and implemented front-end UI with React components and lifecycle hooks.

FLGAN | GAN, PyTorch, Autograd, Numpy, Deep Learning, Neural Network

Paper | Git Repo

- Refined the Deep Convolutional Generative Adversarial Networks (DCGAN) with Focal Loss to improve performance on hard-misclassified samples.
- Proposed an algorithm using Adam Optimizer to minimize Focal Loss to advance the discriminator accuracy.
- Trained 400 epochs using dedicated GPU on Fashion MNIST and FER-2013 datasets.

Education

University of Toronto, St. George

Sept 2018 – June 2023

Honours Bachelor of Science in Statistics, Computer Science, and Mathematics

Toronto, Canada

Graduate Coursework: Generative Modeling Research, Computer Vision, Deep Learning & Neural Nets, Machine Learning
Scholarship Recipient: University of Toronto President's Scholarship Program, 2018

Activities: Recognized Group Leader, *Enriched Data Structures and Analysis*