
WORK EXPERIENCE

Software Engineer

Amazon

February 2022 – Present

Working with a team at Amazon Luna that's focused on bringing their existing Game Publishing, Offer Management, and Customer Policy services into new regions.

- Modeled and provisioned infrastructure for new regions, lowering latency and increasing availability of services.
- Integrated the new infrastructure with CI/CD pipelines, optimizing developer operations through automated tests, deployments, and alarms.
- On-boarded to external partner services in new regions, resulting in parity of service features.

Worked with a team at Amazon Alexa that was focused on launching a second version of the Alexa Proactive Notifications API.

- Lead the development of the Notification Management service, resulting in a 1000 TPS service.
- Co-developed and managed project plan for 6 engineers, helping the team reach a major release milestone.
- Mentored junior engineer through security review of the service, resulting in passing certification.

Software Engineer

Amazon

July 2017 – October 2021

Worked with a highly cross-functional team at Amazon Alexa that was focused on building the 3D character animation system for My Loft video game – exclusive to Echo Show and Fire TV.

- Lead the development of the real-time character system, achieving 50% reduction in download speeds of assets and 38% reduction in device memory footprints – compared to more naïve solutions.
- Lead the development of the character test tool, enabling quicker iteration of thirty character models, hundreds of animations, and thousands of lines of dialogue.
- Lead the development of the character lip-sync animation data pipeline, streamlining the data generation process.

Worked with a cross-functional team at Amazon Alexa that was focused on developing the non-player character AI for Ticket to Ride, a companion skill to the boardgame.

- Implemented a stateless web-tier for managing player turns, optimizing on server costs and failures.
- Lead the development of the AI, resulting in an NPC that chooses its next "best" move on its own.
- Lead the development of the AI test tool, enabling quicker and more focused iteration of the feature.

Worked with a cross-functional team at Amazon Alexa that was focused on developing games and game toolkits for public developers.

- Developed i18n framework for Litexa, an Alexa skill development toolkit, enabling the ability to deliver localized content to customers.
- Developed and open-sourced the GameOn SDK, a NodeJS-based SDK for adding leaderboards to games, leading to more engagement from players.
- Attended GDC 2019 and demonstrated GameOn SDK at company booth, garnering client leads.
- Founded and developed team's first CI/CD pipelines.
- Established operational dashboards for the games for on-call developers.

TECHNICAL SKILLS

Expertise	Web Services (API, Back-End, Distributed Systems, Networking, Security, CI/CD) Video Games (Animation/Gameplay/Event Systems, Content Pipelines, Tooling)
Programming Languages	Java, TypeScript, C++, C# (C Sharp), Python
Tools and Technologies	AWS (CDK, SAM, CloudFormation, CloudWatch, CodeDeploy, DynamoDB, DAX, VPC, ECS, Lambda, EC2, Gateway, S3, SQS, SNS, ElastiCache, Secrets, Route53, Private Link, Load Balancer, Security Groups, Redis, CloudFront), .NET, NodeJS, ThreeJS, Docker, Github Actions, Travis CI, Git, Perforce, Unity, Maya, 3D Blender, Photoshop, Unix, Windows, Visual Studio, JetBrains

PATENTS

US Patent 11250857	Polling with a Natural Language Interface
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EDUCATION

B.S., Computer Science	University of California, Davis	<i>March 2017</i>
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