

Sonal Ranjit

SELF-STARTING INNOVATIVE SOFTWARE DEVELOPER

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SKILLS

Languages: Python, C#, Javascript (ES6), C++, Bash, SQL, Golang

Tools & Technologies: Flask, Django, PostgreSQL, Unity, TravisCI, Docker, Git, AWS, Cypress, React

EXPERIENCE

Software Developer | Shapetrace Inc.

Toronto | May 2016 - April 2019

2018-2019: Oversaw conversion of company engineering team from a single-product company into a generalist software development agency

- Managed development of **ON-FOOT** mobile application (Android/iOS) a fully immersive walking tours application with interactive media, augmented reality and virtual reality, audio stories and imagery.
 - Implemented programming interfaces in C# to interact with backend API for content hosting.
 - Integrated third party SDKs for location and augmented reality functionalities.
 - Developed caching and media handlers for on device asset storage and In-App Purchases.
- Accomplished release of **Kinetic Corps.** mobile game for fitness wearables leading 4-person team in 8-weeks.
 - Built Flask (Python) backend service to interface with Fitbit OAuth 2.0 service and user profile management.
 - Deployed backend on AWS and Elasticbeanstalk service interfaced with a PostgreSQL database.
 - Orchestrated tasks between developers and 3D designers which led to seamless integration and application rollout.

2016 - 2018: Created Augmented Reality based 3D field management application for construction.

- Architected and developed **Shapetrace's** C# and C++ applications.
 - Introduced capability to stream and procedurally-generate large 3D CAD to efficiently render on mobile devices.
 - Developed C++ applications to align 3D point cloud generated by mobile application.
 - Responsible for optimization of application and supporting navigation SDKs developed in house.
 - Co-authored US patent submission of vision-based indoor navigation using 3D CAD models.

Software Developer | MapYourProperty

Toronto | March 2015 - April 2016

- Automated gathering, cleaning, and updating of spatial datasets from various open data sources, reducing data update processes by 97% from 8-10 hours to 15 mins through Bash scripts.
- Interfaced application with SQL database for executing different queries/filter by the application. Architected the API on PHP Laravel backend and built frontend components using AngularJS.

OPEN-SOURCE / PROJECTS

Core Contributor | Bikespace

July 2017 - Present

github.com/bikespace/bikespace

- Spearheaded team of more than 17 engineers/designers to produce the web application and acted as the lead software architect in backend services in Python.
- Developed continuous integration pipelines for Django application with TravisCI and auto deployments to AWS using Elasticbeanstalk and Elastic Container Service.

Core Contributor | Civic Tech Toronto

April 2016 - Present

github.com/CivicTechTO

- Implemented scripts to download and archive 14K+ EPA documents & developed Chrome extension to simplify process of archiving datasets for volunteers around USA/Canada. (Press coverage: [BBC](#), [Washington Post](#), [VICE](#), [CBC](#))
- Part of the organizing team helped facilitate weekly Meetup events in Toronto, accommodating more than 20 projects and average turnout of 50+ attendees.

EDUCATION

Bachelor of Science (B.Sc.), Earth Sciences, York University

2010-2015

Courses: Adjustment Calculus, Statistical Analysis of Overdetermined Systems, Photogrammetry, Time Series and Spectral Analysis, Linear Algebra, Differential Calculus, Fluid Dynamics