George Fedoseev

Software Engineer

Full-stack software engineer with 5+ years of experience in mobile and interactive tech. 30+ interactive projects as a lead software developer. Research experience working with DNN in the speech recognition field.

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Languages: C#, Python, Swift, Objective-C, JavaScript

Technologies: .NET, Unity3D, VR, AR, real-time motion tracking, machine learning, Linux CLI, databases, Git, Docker

01/2019 - 06/2019

- Developed Embedded Gallery and Unsplash Explorer Unity assets for WallARy (AR Gallery Wall). [Unity, Obj-C, Java]
- Collaborating on iOS AR hair coloring app which uses ensembling ConvNets. [Swift, CoreML]
- Developed <u>DropboxSync</u> for integration of Dropbox API into Unity. [Unity]

Senior Software Engineer

at EventAgrate Software and Technologies, Dubai

02/2017 - 01/2019 (01/2018 - 10/2018 remotely)

Worked on 30+ interactive experience projects in the event industry with short delivery times. Used a wide variety of interactive hardware and software.

- Developed a <u>system</u> for aggregating location data from multiple passive RFID tag readers (Impinj xArray) in a large room. Features a 3D GUI for modelling room setup and tweaking the reader configurations remotely. [Unity, RFID]
- Worked on <u>AR outside-in</u> (with IR markers tracking) and inside-out (ARKit) iPad <u>applications</u> for real estate stands.
 [Unity, OptiTrack, ARKit]
- Developed gameplay and networking logic for multi-player VR <u>"Save Dubai from UFOs" game</u> in UE4 for HTC Vive. The game <u>was presented</u> on MESE 2017 and IOTX 2017 in Dubai as a brand attraction. [UE4, VR, Networking]
- Worked on a system of multiple depth cameras blob tracking. The application combined point clouds to track multiple people feet intersections with the floor plane. [Unity]
- Developed interactive Splash Portrait stand for Dubai CityScape exhibition mixing Kinect, OpenCV and decorative
 effects to let users create their artistic portraits in a few minutes. [Unity, Kinect, OpenCV]
- Created a network aggregation system for Kinect skeleton data to combine more than one real-time skeletons in application using several remote sensors. The system was used in <u>Tiffany's app</u> in Dubai Mall for jewelry reveal event. [Unity, Kinect]

Software Engineer

at <u>SpheraVR / MIRVR</u>, Russia 07/2016 – 01/2017

- Built control and analytics system for organizing on-spot VR gaming experiences in malls and cinemas using c# .NET, ASP.NET and AngularJS. Worked with Windows API to automate game launching and identify and track game processes. [.NET, WinAPI, JavaScript]
- Developed <u>GearVR educational application</u> (Unity3D) for watching video courses in a <u>relaxing</u> virtual environment. Built video course player with VR controls and optimized 3d scenes for mobile VR. [Unity, GearVR]

University and Publications

- Bachelor's degree in Applied Math and Computer Science, Saint-Petersburg State University (09/2013 – 06/2018, 2017 – gap year for work)
- Developed a speech recognition system (based on DeepSpeech architecture) for <u>searching in a big collection of video files</u>. Challenge was to programmatically acquire a big enough dataset (> 650hrs of transcribed speech) for the Russian language, which was solved by extracting (audio, transcription) samples from YouTube subtitles (<u>paper</u>). Then DNN was trained on the collected dataset and was able to achieve 18% WER on the voxforge-ru test set (<u>paper 1</u>, <u>paper 2</u>). [Python, TensorFlow]
- Setup and configured (see <u>poster</u>) Continuous Integration system using GitLab and Docker for <u>MPD Root project</u> (Joint Institute for Nuclear Research) and optimized build times (<u>paper 1 paper 2</u>). [Docker, GitLab]

Contributions and Personal Projects

- Wrote Dockerfile and a few other things for Mozilla's <u>DeepSpeech project</u>.
- Released <u>6 iOS apps on the AppStore</u>:
 - EZ Game casual tap game about space-scale building constructions for iOS and Android.
 - 3-Things-to-Do minimalistic to-do list iOS app with only 3 items per day to focus on what matters the most today.
 Was reviewed on AppAdvice.
 - University 3D campus map app with timetable and navigation which was made for a hackathon and took the first place.