Stan Serebryakov

Software Engineer

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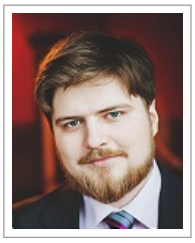

Education

2004–2010 **MSc in Robotics**, *Polytechnical University*, St. Petersburg.
Simultaneous Localisation and Mapping with ToF Camera

2010–2012 **PhD student in Applied Math**, *Polytechnical University*, St. Petersburg.
Monocular 3D Tracking

Experience

2024–2025 **R&D Engineer**, *MPK Soft*, St. Petersburg.
- Participated in development of signal scanning software
- Designed and implemented data processing server (and client library) based on asio
- Implemented broad LoRa chirp recognition and frequency-hopping table estimation

2021–2023 **iOS Engineer**, *Constanta*, Moscow.
- Implemented many features, core frameworks, refactored old code, reviewed MRs in leading sports analytics app.
- Upgraded Objective-C ANN tracking app prototype into published Swift app, video

2015–2021 **iOS Engineer**, *Luxoft*, St. Petersburg.
Development of multiple iOS applications for different clients such as:
- iStockTrack app, a stock markets data browser that supports voice and text messaging capabilities for communication with market advisers, video
- Citibank private banking app, based on Cordova
- Gazpromneft refueling app
- Gosuslugi citizens feedback app and executors app.

Also conducted hundreds of technical interviews worldwide.

2015–2015 **iOS Engineer**, *GuessMe*, St. Petersburg.
A social network iOS application similar to Instagram. The application provided the ability for users to create interactive posts and share them with the most relevant contacts. My tasks included:
- Swift JSON mapper generator
- iOS system tasks (networking, data management etc)

2014–2014 **Lead R&D Engineer**, *x-Turion*, St. Petersburg.
Hardware and software development of a small home robot equipped with a surveillance camera that was used to control video and audio in private premises. Among the main features of the device were the capabilities of autonomous navigation, object and face recognition, and control through mobile application. Software for the robot development was based on the Robot Operating System (ROS), C++, and Java programming languages.

2012–2014 **Mobile Engineer**, *i-Free*, St. Petersburg.
Multiple projects for iOS/Android application development, such as:
- a museum events browser with tickets booking capabilities
- voice assistant for search queries on the Internet in natural language, similar to Siri

2011–2012 **Haskell Engineer**, *Snowfall*, Internet.
OpenGL visualization of quant analysis software

2010–2011 **Lead Engineer, Co-founder**, *Cybrox*, St. Petersburg.
3D IR-based head tracker development. Webcam-based 6D head tracker research
- Implemented OpenCV-based prototype, ported to C running Blackfin DSP
- Co-authored business plan, patent etc

2009–2010 **Research Assistant**, *Jacobs University*, Bremen.
PreCombine3D project: PMD ToF-camera driven 3D tracking. Implemented calibration, motion estimation software and camera Ethernet driver. Co-authored a paper.

2008–2009 **Computer Vision Developer**, *CRDI for Robotics*, St. Petersburg.
R&D of computer vision problems: face recognition, 3D tracking, and reconstruction

Skills

Languages Swift, Objective-C, C++, C, Haskell. Familiar with Zig, Java, Python

Areas iOS Development, Unix, 3D Graphics, DSP, Computer Vision, LaTeX

Master thesis

title *Simultaneous Localisation and Mapping with Time-of-Flight Camera*

description The work presents a visual navigation system in real time using the time-of-flight camera without a priori knowledge of the scene. A method for fusing time-of-flight and the optical camera and methods for increasing the robustness of localization, taking into account the color and spatial information is discussed.

Interest & hobbies

Saxophone, jazz and improvised music.

Math, HCI, simulation, game development.

Talks and Publications

- Arrows and Functional Reactive Programming @ SPb Haskell User Group
- Computer Vision Introduction @ Chaos Constructions'2009
- A. Nuechter, S. Serebryakov, L. Stankevich: "Visual SLAM with Time-of-Flight Camera", Journal of Optical Technology, 2010
- Student at Microsoft Computer Vision Summer School, MSU'2011