Zurich, Switzerland
ivan.tishchenko96@gmail.com
(+41) 77 908 1469

Ivan Tishchenko

tishchenko.me
github.com/ivantishchenko
linkedin.com/in/ivan-tishchenko

Employment

Software Engineer — **Cyfex AG, Zurich, Switzerland** — **Jan 2021 – Present**

Design and implementation of visual computing algorithms

- Improved a 3D surface registration algorithm by 36% and integrated it into the product.
- Reduced the error rate of a statistical model by 8% and integrated it into the product.
- Implemented novel keypoint detection, local 3D surface descriptors and signature matching.
- Implemented multi core evaluation tools for a quantitative analysis of surface registration.

Technologies: C++, Python, Docker

Research Assistant — **ETH Zurich, Zurich, Switzerland** — **July 2020 – Jan 2021**

Research at Computer Vision and Geometry group, Institute for Visual Computing

- Proposed a novel Deep Learning based method for scene flow estimation on point clouds.
- Outperformed the state-of-the-art baseline by 14%.
- Published a paper at the International Conference on 3D Vision, oral presentation, acceptance rate ca. 5%.

Technologies: Python, PyTorch, Microsoft Azure, GNU/Linux

Software Engineer, Intern — **Swisscom AG, Bern, Switzerland** — **Feb 2019 – Oct 2019**

Full stack web software development for the real-time billing and rating team

- Back-end: Implemented a REST API, persistence layer and access control.
- Front-end: Developed a highly-customizable visualization dashboard.
- Tooling: Set up a CI/CD pipeline, continuous monitoring, automated unit testing and static code analysis.
- Deployed the app into the production cloud environment. The app is actively used on Swisscom's intranet.

Technologies: Java, JavaScript, HTML/CSS, MariaDB, TDD, BDD, CI/CD

Software Engineer — **Astrivis AG, Zurich, Switzerland** — **Oct 2018 – Feb 2019**

Development of the 3D model gallery mobile app

- Implemented reliable fetching and synchronization from the cloud-based API.
- Designed and implemented a drag and drop UI feature.
- Refactored and modularized the code by using Fragments.

Technologies: Java, Android SDK, Network communication

Education

Zurich, Switzerland — **ETH Zurich** — **Sep 2017 – July 2020**

M.Sc. in Computer Science, GPA: 5.39/6.0.

- Selected for the “Master Scholarship Program”. Awarded to the top 10% of the Bachelor’s degree program.
- Selected Coursework: Advanced Systems Lab, Computational Intelligence Lab, Advanced Machine Learning.
- Thesis at Computer Vision and Geometry Group supervised by Prof. Marc Pollefeys. Grade: 6.0/6.0. [report]

Kyiv, Ukraine — **NTUU “Kyiv Polytechnic Institute”** — **Sep 2013 – July 2017**

B.Sc. in Computer Engineering, GPA 4.82/5.0.

- Selected Coursework: Algorithms and Computational Methods, Parallel Computing, Computer Networks.

Publications

- Tishchenko, Ivan, et al. "Self-supervised learning of non-rigid residual flow and ego-motion." 2020 International Conference on 3D Vision (3DV). IEEE, 2020. [code, arXiv]

Technical Skills

- Programming skills: C++, Python, Java, JavaScript, HTML, CSS, SQL, Shell
- Platforms: GNU/Linux, macOS, MS Windows
- Tools: Git, Docker, Jenkins, MySQL

Languages

- English (fluent, IELTS 7.5), German (fluent, Goethe C2), Ukrainian (native), Russian (native), Chinese (basic)