Illya Starikov

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San Francisco Bay Area

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~~Obsessing over~~ focusing on improving the future of digital communication. *Striving to make an impact on the world.*

Experience

9/2023	**Software Engineer** *Research, ⚗ Labs*
	Google Project Starline *San Francisco Bay Area*

9/2023	**Software Engineer** *Devices & Services Product Area (DSPA)*
12/2019	**Google** Central Test Engineering *San Francisco Bay Area*

- Architected an ML system to make Nest and Pixel factory data more insightful and actionable
  - Pioneered **6** novel ML use-cases, across **7** programs, with accuracy up to **98.5**%
  - Example pipelines include clustering common failures from previous products, classifying said failures in future products, and using regression to produce new metrics or replace old ones
- Founded or co-founded efforts to scale software within entire organization: documentation overhaul (internal **350 new users/month, 750 new sessions/month**), boost software testing (**hundreds of new test cases**), test station adoption org-common or team-common libraries (**code reduction up to 70**%)
- Implemented initial factory data downloader (adopted by org, external teams), common audio test framework (entire team), and lead forums for knowledge sharing (team participation)
- Factory audio software DRI for Nest Cam, Pixel Tablet, Pixel Buds Pro
  - **Saved $120k in program capex** by optimizing Nest Cam (**52**%) and Pixel Tablet (**23**%) test time
  - Nest Cam's test script was **fastest within Google audio** (by **36**%) during entire tenure
  - Nest Cam was Nest's first fully-remote program, from PROTO to MP

Garmin, 2¹/₂ y

12/2019	**Software Engineer** *Aviation*
7/2018	**Garmin** Safety & Datalink *Greater Kansas City Area*

- **Lead system testing effort** to meet DO-178B compliance on GDL-60
  - Designed new test architecture, supported test infrastructure, and wrote test plans
- Implemented embedded software to synchronize configuration between two operating systems
- Lead a high-school focused engineering project to build and race a hovercraft, presented at Kansas State's ACM, guided children with Bring Your Child To Work Day projects, hosted tours

7/2018	**Software Engineering Intern** *Aviation*
8/2017	**Garmin** Interfaces/Data Routing *Rolla, MO*

- Implemented quality-of-life improvements for a highly-utilized aviation tool
- Implemented validation system for said tool, resulting in **25**% **code reduction** in affected classes

8/2017	**Software Engineering Intern** *Automotive OEM*
5/2017	**Garmin** *Greater Los Angeles Area*

- Brought-up and maintained automation suite to assess the performance of navigation routing
- Enhanced reliability (**80**% **to 100**% **success rate**) and execution time (**5×** **speed up**) of automation suite by developing on-device APIs and consuming new, optimized APIs in test suite

12/2017	**Team Lead & DRI** *Aerospace*
4/2016	**Missouri S&T Satellite Team** Stereoscopic Imaging *Rolla, MO*

- **Lead 6 person team** of undergraduate and graduate students to deliver nanosatellite payload: mid-flight, stereoscopic capture (via MR SAT) and 3D reconstruction of a paired satellite (MRS SAT)
- Wrote synchronous flight capture code across **2×** cameras to run on-device (Rasperry Pi)
- Collaborated with chief engineer, program manager, and program subsystems to architect flight code
- Satellite is undergoing testing and reviews, scheduled for launch of Summer 2024

5/2017 8/2016	**Undergraduate Teaching Assistant** *Computer Science* **Missouri University of Science and Technology** *Rolla, MO* ○ Taught programming concepts to freshman/sophomore-level students across $3\times$ classes: Introduction To Programming (Class+Lab), Data Structures (Lab) ○ Created assignments, graded assignments, tests for **class sizes upto 60 students** ○ Automated grading with tools to detect plagrism, styleguide conformance, and course-specific rules
12/2014 9/2014	**Assistant** *Employment Services* **Jefferson College** *Hillsboro, MO* *Rehired* 5/2015–8/2015, 5/2016–8/2016 ○ Created user manual to serve as a guide for all new employment services assistants ○ Maintained large student-employment databases via college's content management system ○ Designed posters, fliers, and newsletters for campus announcements
8/2014 5/2014	**Web Developer** **Freelance** *De Soto, MO* ○ Supported **6** projects for various clients: creating websites, mockups, data mining, data entry ○ Specialized in Wordpress and Bootstrap frameworks, crafting sites to meet client's requirements

Software Engineer Project Starline **Google** 9/2023–present
Software Engineer Central Test Engineering **Google** 12/2019–9/2023
Software Engineer Safety & Datalink **Garmin** 8/2017–6/2018
Software Engineering Intern Interfaces/Data Routing **Garmin** 8/2017–6/2018
Software Engineering Intern Automotive OEM **Garmin** 5/2017–8/2017
Bachelor of Science Computer Science **Missouri S&T** 1/2015–12/2018
Team Lead & DRI **Missouri S&T Satellite Team** 4/2016–12/2017
Undergraduate Teaching Assistant Computer Science **Missouri S&T** 8/2016–4/2017
Computer Lab Assistant **Missouri S&T** 1/2016–4/2017
Employment Services Assistant **Jefferson College** 9/2014–12/2014, 5/2015–8/2015, 5/2016–8/2016
Web Developer **Freelance** 5/2014–8/2014
Computer Lab Assistant **Missouri Valley College** 9/2013–5/2014

TECHNICAL

tech	**Languages** Python, C++, C, BASH, SQL, LaTeX *Previous* Swift, C#, Lua, Perl **ML** scikit-learn, TensorFlow, Colab, Google Cloud Platform (GCP) **Tools** Git, i3wm, Make, regex, tmux, Tmuxinator, Vim, ZSH **Python** Cython, matplotlib, numpy, pandas, pdb, pyenv, SciPy, sphinx, tox, venv **C++** boost, catch2, lldb, stdlib, STL, valgrind
misc	**15** interviews, **1** intern, $7\times$ Google Peer Bonus, $3\times$ Google Spot Bonus, Googler Thank You Campaign receipient, {Garmin new-hire, Google new-hire, Starline} Trivia Winner, 1st Place MegaMiner AI , Summa Cum Laude honors, $6\times$ Deans List Award, $18^{th}/229$ Missouri S&T ACM SIG Competition ranking

EDUCATION

12/2018 1/2015	**Bachelor of Science** *Computer Science* **Missouri University of Science and Technology** *Rolla, MO* GPA **3.83**/4.0; Major GPA **3.88**/4.0; **Summa Cum Laude** **Advisers** Dr. Jennifer Leopold, Dr. A. Ricardo Morales, Dr. Simone Silvestri, Professor Clayton Price **Associations** Academy of Computing Machinary (**ACM**) [2/2016–5/2018], Missouri S&T Satellite Team (**MSAT**) [12/2017–5/2018], Institute of Electrical and Electronics Engineers (**IEEE**), [1/2016–5/2017] **Coursework** Artificial Intelligence, Evolutionary Computing, Data Mining, Object-Oriented Numerical Modeling, Analysis of Algorithms, Undergraduate Research, Differential Equations, Calculus I-III, Linear Algebra, Statistics, Discrete Mathematics, Modern Physics, Physics I-II, Chemistry, Micro Embedded Design
	Private Pilot Ground School 3/2019–5/2019 **Jefferson College** 8/2014–12/2014 *A+ scholarship* **Missouri Valley College** 8/2013–5/2014 *Cross-Country/Track & Field scholarship*