


ILLYA STARIKOV

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$\int_{2017} expertise$ (Data Science, Cloud, System Design) $dt = 7^+$ YoE
Software Engineer applying AI & ML to build the future of digital communication. *Pursuing opportunities to put a dent in the universe.*














EXPERIENCE

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- 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*

- o Architected an ML system to make Nest and Pixel factory data more insightful and actionable
 - o Pioneered **6** novel ML use-cases, across **7** programs, with accuracy up to **98.5%**
 - o 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
 - o Hosted intern who built a data fusion of {"3D" Lidar + "2D" photos}, implementing feature matching via ML SuperGlue Network and OpenCV ORB, producing color depth-maps and interactive 3D reconstructions
 - o 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%**)
 - o Implemented initial factory data downloader (adopted by org, external teams), common audio test framework (entire team), and lead forums for knowledge sharing (team participation)
 - o Factory audio software DRI for Nest Cam, Pixel Tablet, Pixel Buds Pro
 - o **Saved \$120k in program capex** by optimizing Nest Cam (**52%**) and Pixel Tablet (**23%**) test time
 - o Nest Cam's test script was **fastest within Google audio** (by **36%**) during entire tenure
 - o Nest Cam was Nest's first fully-remote program, from PROTO to MP
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- Garmin, 2¹/₂ y
- 12/2019 **Software Engineer** *Aviation*
7/2018 **Garmin** Safety & Datalink *Greater Kansas City Area*

- o **Lead system testing effort** to meet DO-178B compliance on GDL-60
 - o Designed new test architecture, supported test infrastructure, and wrote test plans
 - o Implemented embedded software to synchronize configuration between two operating systems
 - o 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*

- o Implemented quality-of-life improvements for a highly-utilized aviation tool
 - o 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*


- o Brought-up and maintained automation suite to assess the performance of navigation routing
 - o 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*

- o **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)
 - o Wrote synchronous flight capture code across 2× cameras to run on-device (Raspberry Pi)
 - o Collaborated with chief engineer, program manager, and program subsystems to architect flight code
 - o Satellite is undergoing testing and reviews, scheduled for launch on Summer 2024

5/2017	Undergraduate Teaching Assistant <i>Computer Science</i>
8/2016	Missouri University of Science and Technology <i>Rolla, MO</i>
	<ul style="list-style-type: none"> ○ Taught programming concepts to freshman/sophomore-level students across 3× 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	Assistant <i>Employment Services</i>
9/2014	Jefferson College <i>Hillsboro, MO</i>
	<p><i>Rehired</i> 5/2015–8/2015, 5/2016–8/2016</p> <ul style="list-style-type: none"> ○ 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	Web Developer
5/2014	Freelance <i>De Soto, MO</i>
	<ul style="list-style-type: none"> ○ 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
	<i>Software Engineer</i> Project Starline Google 9/2023–present
	<i>Software Engineer</i> Central Test Engineering Google 12/2019–9/2023
	<i>Software Engineer</i> Safety & Datalink Garmin 8/2017–6/2018
	<i>Software Engineering Intern</i> Interfaces/Data Routing Garmin 8/2017–6/2018
	<i>Software Engineering Intern</i> Automotive OEM Garmin 5/2017–8/2017
	<i>Bachelor of Science</i> Computer Science Missouri S&T 1/2015–12/2018
	<i>Team Lead & DRI</i> Missouri S&T Satellite Team 4/2016–12/2017
	<i>Undergraduate Teaching Assistant</i> Computer Science Missouri S&T 8/2016–4/2017
	<i>Computer Lab Assistant</i> Missouri S&T 1/2016–4/2017
	<i>Employment Services Assistant</i> Jefferson College 9/2014–12/2014, 5/2015–8/2015, 5/2016–8/2016
	<i>Web Developer</i> Freelance 5/2014–8/2014
	<i>Computer Lab Assistant</i> Missouri Valley College 9/2013–5/2014

TECHNICAL

tech	<p>Languages Python, C++, C, Bash, SQL, \LaTeX <i>Previous</i> Swift, C#, Lua, Perl, Assembly, Lisp, Matlab, Vimscript, Basic, AppleScript, ActionScript</p> <p>ML scikit-learn, TensorFlow, Colab, Google Cloud Platform (GCP)</p> <p>Tools Git, i3wm, Make, regex, tmux, Tmuxinator, Vim, ZSH</p> <p>Markup CSS, HTML, JSON, Markdown, reStructuredText, XML, YaML</p> <p>Python Cython, matplotlib, numpy, pandas, pdb, pyenv, SciPy, sphinx, tox, venv</p> <p>C++17 Boost, catch2, lldb, STL, valgrind</p>
stats	7 consumer projects, 15 interviews conducted, 1 intern hosted, > 700 CLs submitted, > 100 "tickets" closed, 8 managers reported to
kudos	7× Google Peer Bonus, 3× Google Spot Bonus, Googler Thank You Campaign recipient, {Garmin new-hire, Google new-hire, Starline} trivia winner, 1 st Place MegaMiner AI, Summa Cum Laude honors, 6× Deans List Award, 18 th /229 Missouri S&T ACM SIG Competition ranking

EDUCATION

12/2018	Bachelor of Science <i>Computer Science</i>
1/2015	Missouri University of Science and Technology <i>Rolla, MO</i>
	<p>GPA 3.83/4.0; Major GPA 3.88/4.0; Summa Cum Laude</p> <p>Advisers Dr. Jennifer Leopold, Dr. A. Ricardo Morales, Dr. Simone Silvestri, Professor Clayton Price</p> <p>Associations Academy of Computing Machinery (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]</p> <p>Coursework Artificial Intelligence, Evolutionary Computing, Data Mining, Object-Oriented Numerical Modeling, Analysis of Algorithms, Undergraduate Research, Differential Equations, Calculus, Linear Algebra, Statistics, Modern Physics, Physics, Discrete Mathematics, Web Design, Micro Embedded Design, Chemistry</p>




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*

5/2013 High School *diploma*

8/2009 **De Soto Senior High** *De Soto, MO*

 **Associations** Cross-Country (Class 3, 2× All-District individual [2011–2012], 1× All-District team [2012], #5 team state ranking [2012]), Track & Field, Future Business Leaders of America (FBLA)

5/2009 Elementary, Middle School *diploma*

8/2000 **Sunrise R-IX School District** *De Soto, MO*



Associations Cross-Country, Basketball, Computer Club, Quiz Bowl, Chess Club, Yearbook Design

Awards Presidential Fitness Award [x8, 2001–2009], School Speech Contest Winner