

Paul Shved

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PROFESSIONAL EXPERIENCE

- Zoox** **Oct 2019 – Apr 2020**
Senior Perception Software Engineer
- Delivered improvements to a Lidar object detection model (e.g. reduced confusion for a rare class by X%) by identifying opportunities in the literature, evaluating, and incorporating them into the onboard software
 - Reduced feature footprint and training time of an object classification model while improving its performance (AUC) by Y%, advised 2 collaborators on avoiding regressions when installing new features
 - Boosted performance of Perception team by initiating and contributing to a training automation project (reduced the time to release by 1 week), and championing mature practices (rebuilt a model to allow 4 engineers to contribute independently)
- Google** **Oct 2012 – Sep 2019**
Senior Software Engineer, Tech Lead
- Built a large-scale ML data processing framework for [Search Ads machine learning](#) infrastructure, partnered with 3 customer teams to incorporate the framework into 3 ML pipelines of Search Ads scale. Earned the “Ads Quality Citizenship Award” in 2019 for the impact on the organization performance
 - Led a 7-engineer team in [Google App Engine](#) cloud product, designed and launched new infrastructure that powers two new Cloud products as well as the existing offering without any migration downtime and ahead of schedule. Enabled the N orders of magnitude user growth by building new software and revamping the existing stack
 - Mentored 5 junior engineers, most of whom grew into the senior roles on my and other teams
 - Designed and delivered a 0% loss data distribution service for the [Knowledge Graph](#) Indexing team, which improved the availability metrics for two Google Assistant features by XX%
- ROSA Lab** **Sep 2011 – Sep 2012**
Senior Software Engineer
- Led the Productivity effort of ROSA Enterprise Linux distribution by building collaboration tools for 10+ engineer teams and running the Scrum-based development process
- Institute for System Programming** **Sep 2007 – Sep 2011**
Graduate Research Assistant
- Authored and co-authored 2 journal papers and 5 conference publications; ≈100 citations [[Scholar](#)].
 - Research focus: Automated Software Verification & Validation, Static Analysis. Built the production-grade verification tool that attained the state-of-the-art in Software Verification competition at TACAS’12 in the “Device Drivers” category

EDUCATION

- Stanford University** **2018 – 2019**
Artificial Intelligence Graduate Certificate [[certificate](#), [description](#)]
- GPA 3.5. Course [projects](#): Visual Emotion Recognition (“[Smiling Robot](#)”, CNN, Raspberry Pi), “Unsupervised feature learning from Wine Reviews” (LDA + clustering), “Training RNN as an Ad Copywriter” (LSTM + VAE), “Self-driving under uncertainty” (POMCPOW + MCTS)
- Institute for System Programming** **2008 – 2010**
M.S. Computer Science
- Moscow Institute of Physics and Technology** **2004 – 2008**
B.S. Applied Mathematics and Physics

SKILLS

- Computer Vision: ability to research, implement, ship, and debug object detection and classification models based on modern CNN architectures (Faster R-CNN, SSD, ResNet, FPN, MaskLab, and others)
- Successful track record of leading teams, setting their goals, and managing their work
- Coding polyglot: proficient in C++, Go, Python, Ruby, Perl, C, Bash, SQL, OCaml
- Mathematical approach to coding: I write simulations, design novel algorithms, and prove their correctness if needed

PERSONAL ACCOMPLISHMENTS

- Made an [SF Muni Sign](#) using Raspberry Pi and Arduino [[featured](#) on Hacker News]
- Competed in the USA Cycling official Road Racing league for 4 years, achieved a racing category upgrade
- Since 2010, maintained [a programming blog](#) averaging 3000 visits a month in 2019