Dmitrii Avdiukhin

Resume

✉ *dimonbv@gmail.com*
dyukha.github.io

Research interests

Projected gradient descent, Balanced graph partitioning, Distributed algorithms.
Previous areas: syntax/static analysis, model generation, model checking.

Education

2017–current **Ph.D.**, *Indiana University*, Bloomington, IN.
Advisor: Grigory Yaroslavtsev (`grigory.us`)

2008–2013 **Specialist (5 years) Degree**, *Saint Petersburg State University*, GPA $4.9/5.0$.
Diploma with distinction. Thesis title: "Translation definition language for information system reengineering tools"

Experience

Summer 2019 **Research Intern**, *Amazon*, New York.
Improving accuracy and performance of graph convolutional networks

Summer 2018 **Software Engineer**, *Pro Unlimited @ Facebook*, Menlo Park.
Implementing balanced graph partitioning algorithm

2016-2017 **Researcher**, *ITMO University*, Saint Petersburg.
Model generation from execution traces

2013-2016 **Software Engineer**, *JetBrains*, Saint Petersburg.
SQL dialects support

2012-2013 **Software Engineer**, *Lanit Tercom*, Saint Petersburg.
Participating in project of migration a system from SQL Server to Oracle

Publications

NeurIPS 2019 in submission G. Yaroslavtsev, S. Zhou, and D. Avdiukhin. ""Bring Your Own Greedy"+Max: Near-Optimal $1/2$-Approximations for Submodular Knapsack "

VLDB 2019 D. Avdiukhin, S. Pupyrev and G. Yaroslavtsev. "Multi-Dimensional Balanced Graph Partitioning via Projected Gradient Descent"

KDD 2019 D. Avdiukhin, S. Mitrovic, G. Yaroslavtsev and S. Zhou "Adversarially Robust Submodular Maximization under Knapsack Constraints". Oral presentation, 9.2% acceptance rate.

INDIN 2017 D. Avdyukhin, D. Chivilikhin, G. Korneev, V. Ulyantsev and A. Shalyto. "Plant trace generation for formal plant model inference: methods and case study"

Perspectives of System Informatics 2015 — E. Verbitskaia, S. Grigorev and D. Avdyukhin. "Relaxed Parsing of Regular Approximations of String-Embedded Languages"

Talks

KDD 2019 — Presenting "Adversarially Robust Submodular Maximization under Knapsack Constraints"

Competitive programming

ACM ICPC — Latest result: 19th place on world semi-final, 2014 (`neerc.ifmo.ru/archive/2014/standings.html`)

Codeforces — Rating: 2135 (`codeforces.com/profile/dyukha`)

Topcoder — Rating: 1784 (`www.topcoder.com/members/dyukha`)

Skills

Languages — Kotlin, C#, Java, Python, C++, Haskell, F#, various SQL dialects, Coq

VCS — git, Mercurial, SVN

English — TOEFL: 100, Upper-Intermediate

Hobbies

Badminton, volleyball.