Mark Lavrentyev

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Relevant Coursework

Intro to Software Eng. • Deep Learning • Formal Methods • Formal Proof & Verification • Programming Languages • Prescriptive Analytics • Probabilistic Methods in CS • Abstract Algebra • Topology • Grad. Topology* • Complex Analysis*

* - denotes in-progress course

Programming Languages

Racket • Scala • Java • C# • Python • Prolog • Haskell • SQL • TypeScript • HTML/CSS • Alloy

Technologies

Heroku • React • Oracle SQL • IBM CPLEX Optimizer • PostgreSQL • Linux • GitHub Actions

Other Skills

English (native) • Russian (native) • Git • LaTeX

github.com/MLavrentyev

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Education

Brown University, Providence, RI — Sep. 2018 - Dec. 2022
- Concentration: Sc.B., Mathematics - Computer Science
- GPA: 3.93/4.00

Work Experience

Microsoft: *Software Engineering Intern* — Summers 2020, 2021
- Delivered a new admin DLP feature for the Power Platform admin center (2020)
- Built notification center and analytics alerts system for PPAC (2021)

Systems & Technology Research: *Research Intern* — Spring 2021
- Developed package to parse potential financial crime alerts for data analytics
- Worked in Oracle SQL developing views for risk case management team

Fidelity Investments: *Data Engineering Intern* — Summer 2019
- Developed package to parse potential financial crime alerts for data analytics
- Worked in Oracle SQL developing views for risk case management team

Air Force Research Lab: *Wright Scholar* — Summer 2017
- Developed MOSSE-based fast image annotation program for machine learning research
- Optimized face-detection program running on Jetson TX2

Projects & Contributions

Vehicle Routing Solver (github.com/MLavrentyev/vehicle-routing)
- Solver for finding least-cost routing to customers while respecting truck capacities

Forge (github.com/tnelson/Forge)
- Alloy-like formal methods language. Language development & documentation.
- Added support for BDD solvers, custom SAT solvers, and integers.

Purchase Request Manager (github.com/MLavrentyev/TeamManager)
- Application for teams to manage purchase requests through centralized site

Other projects can be found at github.com/MLavrentyev

Activities

Teaching Assistant — Sep. 2019 - present
- Meta TA - Coordinate CS department undergraduate TA program (2021 - 2022)
- Head TA - Prescriptive Analytics (Spring 2021), Logic for Systems (Spring 2020)
- TA - Programming Languages (Fall 2020), Intro Linguistics (Fall 2019)

Brown Formula SAE Racing Team — Sep. 2018 - present
- Captain (2022). Aided in designing, building, and racing a formula-style race car
- Led engine tuning effort through engine & chassis dyno testing

FIRST Robotics Competition Team 4557 — Sep. 2014 - May 2018
- Programming team lead (2017), drive team member (2016-2018).