

Aldiyar Abdrahmanov

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Skills

- **Programming Languages:** C++, Python, Golang, C#, Java.
- **Technologies:** Unity, .NET, PostgreSQL, Git, Perforce, Linux/UNIX (Red Hat Enterprise), MS Office, LATEX, Valgrind, GDB,
- **Areas of Expertise:** Software development, debugging, object-oriented programming, algorithms, data structures, system programming, parallel processing.
- **Languages:** English, Russian, and Kazakh (Fluent), Korean, Romanian (Proficient).

Achievements

- **Competitive Programming:** Winner of multiple regional and international competitions in C++, such as: Kazakhstan Republican Olympiad in Informatics (C++), Bronze in 2014, Silver in 2015, Bronze in 2016, Silver in 2017; International Zhautykov Olympiad in Informatics (C++), Bronze in 2015, Bronze in 2016; Eurasian Olympiad in Informatics (C++), Bronze in 2016.
- **Certifications:** Completed MIT online courses on Time Series and Probability on edX.

Professional Experience

Cadence Design Systems, Korea

Senior Software Engineer

July 2024 – October 2025

- Developed and deployed three key updates to our C++ code to support sub-7nm chip nodes, reducing the average DRC violations in cutting-edge designs by 4%.
- Introduced a new step in the flow that provided an alternative optimization strategy for semiconductor design by targeting improvements on source drivers.
- Enhanced use of data structures on C++ for cutting-edge customer projects, reducing turnaround time by 10%, DRC violations related to spacing by a factor of 3.
- Served as an integral member of the Innovus™ NanoRoute™ development team, focusing on optimizing EDA routing paths. Resolved over 10 C++ issues related to data structures and proprietary technology.
- Used GDB and version regression for debugging, along with Perforce and Reviewboard for streamlined version control.

Software Engineer

Sep 2021 – July 2024

- Fixed and deployed a critical issue in an experimental branch that was causing frequent segmentation faults for customers, restoring software reliability.
- Fixed and deployed a parallel processing issue related to C++ creating threads in parts of the code that were not MT-safe.
- Fixed and deployed over 20 C++ functionality and out-of-bounds issues.

Various

Contractual Software Development

Dec 2019 – Jun 2021

- Lead developer for Casino Stadium, a Facebook game, and performed maintenance on other games using Unity, Flash, and PostgreSQL preventing their deletion from Facebook store.
- Assisted in developing a Virtual Reality project for a VR Research Lab using Unity and C#.
- Researched automated test generation techniques using Randoop and EvoSuite.

Education

Ulsan National Institute of Science and Technology

Bachelor's Degree in Computer Science and Engineering

Aug 2017 – Jun 2021