Kerim Kochekov

Github: www.github.com/kerimkochekov
Languages: Python, C/C++, Java, SQL, Javascript

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Linkedin: www.linkedin.com/in/kerimkochekov
Technologies: AWS, Git, Jenkins, Django, NodeJS

EDUCATION

- **Hong Kong University of Science and Technology, PhD**   Sept 2022 – Aug 2026 (expected)
  Research area: Parametrized algorithm and Verification.

  ○ Passed the interview process with a success rate of 1.7% (number of offers/number of interviewees).

  ○ Won scholarship of Hong Kong PhD Fellowship Scheme (HKPFS) of HK$1,445,200 (approximately US$184,100) by selecting among the best and brightest 300 students over the world for 2022.

- **Innopolis University, BSc in Computer Science (Data science)**   Aug 2018 – Aug 2022
  Related Coursework: Computer Vision, Practical ML and DL, Big Data, Data mining

EXPERIENCE

- **Morphy Capital**   Istanbul, Turkey
  Quantitative Researcher   *May 2022 - August 2022*

  ○ **Feature engineering**: Developed an analytical feature selection algorithm for designed models consisting of dynamic 20+ variables (specific to stock data).

  ○ **Machine learning**: Constructed model for 20 most popular stocks using Catboost (gradient boosting tree algorithm) and outperformed predictions of baselines of the company by 9% with the help of model and feature selection algorithm.

  ○ **Analysis**: Investigated the relationship between the most popular the 20 stocks to generate correlation data for the machine learning algorithm and introduced new 6 metrics for evaluating the model performance.

  ○ **Reports**: Effectively communicated research reports and trade ideas with the institutional and retail sales teams.

- **Codechef, Unacademy**   Remote
  Problem Setter   *December 2021 - April 2021*

  ○ **Problem setting**: Set innovative algorithm problems for monthly challenges of Codechef.
  Problems link: www.codechef.com/tags/problems/mrkerim

  ○ **Project**: Worked on a "Curated learning" project for preparing hints and auxiliary editorials for beginner-level programmers to solve non-challenging tasks.

  ○ **Algorithm labeling**: Determined algorithmic labels for a certain amount of tasks that would be helpful to participants who fail to solve.

- **Innopolis University, Lab of Software development**   Remote
  Data Engineer   *May 2021 - July 2021*

  ○ **Filtered data using SQL**: Worked together with the Department of Education to retrieve data using Moodle API and filtered retrieved data using SQL to prepare the periodic local database for my new developing application.

  ○ **Django application**: Developed an application for helping professors and administrators track the grading status of all assignments of all courses in some term. Implemented backend with Django while feeding with my prepared local database. To conclude the project and present it to stakeholders, deployed the application to simple MVP with basic frontend using Javascript.

- **Innopolis University, Lab of Autonomous Transport Systems**   Innopolis, Russia
  Intern Researcher (Data scientist)   *May 2019 - June 2019*

  ○ **Research**: Investigated effective augmentation techniques with already prepared autonomous vehicle datasets.

  ○ **Reports**: Wrote weekly statistical reports about the results and findings of each week's research.

  ○ **Framework**: Developed an adaptive classical augmentation model in Keras for an autonomous vehicle project.

Projects

- **Distributed Online Judge**: www.github.com/IU-MAP/project-distributed-online-judge
  - Build a simple distributed computing application for testing programs/problems against test cases in programming competitions with my team. The project was an attempt to port the approach of Lichess's computer analysis feature to competitive programming platforms to donate your machine(CPU, memory) for the system to disburden the server to test other participants' submissions in a fast way without tackling and need of the load-balancer.
  - Project backend implemented in Django by me, and frontend implemented by my teammates in React. Moreover helped develop the script in Linux for testing the solution against provided test cases for that problem.

- **Distributed File System**: www.github.com/KerimKochekov/DFS
  - Implemented DFS with Namenode and Datanodes in the RPyC library of Python.
  - Configured replication strategy to not lose files in case of some Datanodes down.
  - Deployed to AWS with Docker to test scalability and fault tolerance.

Leadership / Activities

Inzva   Remote
Problem Setter   *August 2021 - December 2021*

  - **Voluntarily prepared algorithmic problems**: As part of the organizing team invented and set new problems biggest competition in competitive programming in Turkey - Online Programming Competition 2021.
    www.inzva.com/reports/2021/online-programming-contest-for-universities-2021-report

Seoul National University   Seoul, South Korea
Exchange student   *March 2020 - June 2020*

  - **Study**: Took graduate (MSc) courses as a BSc student during the exchange program.
  - **Research**: Proposed new ideas for optimizing video upload for time-shifted viewing of social live streams.
  - **Project (Mini-Relational Database System)**: Build a simplified relational database system composed of 5 layers: buffer-pool layer, paged-file layer, heap-file layer, access-method layer, and front-end layer. Project implemented in C language.
    Project link: www.github.com/KerimKochekov/Database-Systems

Hackerrank   Remote
Lead and Problem Setter   *October 2017 - December 2017*

  - **Created problems**: As a leader of the organizing team and problem setter of the contest created 5 novel problems for an International programming contest named "101Hack 52" with over 3500 participants on the platform.
    Contest link: www.hackerrank.com/101hack52

Awards

- **Google Kick Start rounds**:
  - **2022 Round D:** ranked 45th place over 8062 participants (top 0.5%)
  - **2022 Round B:** ranked 330th place over 5716 participants (top 5%)
  - **2021 Round B:** ranked 59th place over 7398 participants (top 1%)
  - **2021 Round A:** ranked 242th place over 19840 participants (top 1%)
  - **2020 Round G:** ranked 280th place over 8132 participants (top 3%)
  - **2020 Round C:** ranked 262th place over 13650 participants (top 2%)

- **ACM ICPC Northern Euroasia 2018, 2020 and 2022**: 3rd-degree diploma
- **Facebook Hackercup 2021 3rd round**: ranked 343th place over 34585 participants (top 1%)
- **Google Hash Code 2019**: ranked 101st place over 6647 teams (top 2%)
- **International Olympiad in Informatics 2018**: Bronze medal
- **Asian-Pacific Olympiad in Informatics 2017**: Bronze medal
- **International Zhautykov Olympiad in Informatics (Computer Science) 2018**: Silver medal

Languages

- **Turkmen**: Native proficiency
- **Turkish**: Bilingual proficiency
- **English**: Full professional proficiency
- **Russian**: Limited working proficiency

Links on other platforms

Codeforces: www.codeforces.com/profile/kerim.k
Hackerrank: www.hackerrank.com/kerimk
Innopolis: www.innopolis.university/success-stories/kerim-kochekov