

Emil Indzhev

EDUCATION

- 2018 – 2021 **St Catherine's College,
University of Oxford, UK**
BA Computer Science
Final grade: 86.75/100
Rank: First place
- 2013 – 2018 **Baba Tonka High School of
Mathematics,
Ruse, Bulgaria**
Secondary Education

WORK EXPERIENCE

NOVEMBER 2021 – ONGOING
Radix Trading
Quantitative Technologist
Working on real time and research technology.

JUNE 2021 – SEPTEMBER 2021
Jane Street
Quantitative Trading Intern
Analyzed historical data about trading patterns, participated in mock trading challenges and had a number of trading and finance related classes.

JULY 2020 – SEPTEMBER 2020
Jane Street
Software Engineering Intern
Worked on an internal tool used for managing database permissions and roles based on specifications given by scripts.

JULY 2019 – SEPTEMBER 2019
Ocado Technology
Software Engineering Intern
Worked on a reinforcement learning project about training a robotic arm. Added custom features and environments to the company branch of the Robosuite simulator.

SEPTEMBER 2018 – FEBRUARY 2019
Musala Soft
Software Developer
Developed algorithmic problems for Musala Soft's international programming competition CodeIT.

SOFTWARE SKILLS

LANGUAGES C++, C, Python, OCaml, Scala,
Haskell, Java, C#, JavaScript

PLATFORMS Windows, Linux

OTHER \LaTeX , Microsoft Office, Google
Sheets, Git

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⚡ | github.com/indjev99

PERSONAL PROJECTS

Evolving Snakes

Snakes in an environment similar to the classical game Snake are controlled by neural networks and can reproduce. The snakes evolve and varying emergent behaviors arise.

Particle Structures

Physics simulation with procedurally generated laws that lead to particles forming interesting lattices.

AI's for Board Games

AI's for various board games, based on hard-coded heuristics, various search algorithms, or Monte Carlo approaches.

IUPAC Name Generator

Generates the scientific names of complex organic compounds according to the IUPAC specifications.

Physics Simulation

Physics simulation made up of basic building blocks. Complex physical phenomena, such as wave diffraction, appear without being preprogrammed.

Kigarai

A machine learning library for C++ built from scratch. Supports most common types of layers and activation functions, as well as adding custom ones.

ACHIEVEMENTS AND AWARDS

At Oxford

- 2021 **Overall highest final grade**
Highest final grade for the degree of BA Computer Science
- 2021 **Best student project**
Best dissertation/project submitted for the degree of BA Computer Science
- 2021 **Publication in Information Processing Letters**
Paper title: On complementing unambiguous automata and graphs with many cliques and cocliques

International competitions

- 2022 **Google Hash Code**
2nd place, with team Multiocular O
- 2020 **Google Hash Code**
Finalist, with team Eel
- 2018 **Microsoft Bubble Cup**
Finalist, with team nikva tikva
- 2017 **International Autumn Tournament in Informatics**
Bronze Medal
- 2017 **International Linguistics Olympiad**
Bronze Medal
- 2016 **International Autumn Tournament in Informatics**
Bronze Medal
- 2015 **Balkan Olympiad in Informatics**
Bronze Medal
- 2014 **Junior Balkan Olympiad in Informatics**
Gold Medal
- 2014 **International Conference on Computer Systems and Technologies**
Crystal Prize for Best Paper

Notable national competitions

- 2018 **National Olympiad in Linguistics**
Silver Medal
- 2018 **Spring Competition in Informatics**
Gold Medal
- 2018 **National Olympiad in Physics**
Laureate
- 2018 **National Olympiad in Informatics**
Gold Medal
- 2017 **Autumn Competition in Physics**
Silver Medal
- 2017 **Young Physicists' Tournament**
First Place, with team Perun

OTHER ACTIVITIES

ONGOING

Informatics and Linguistics Competitions

Problem Setter and Grader

Frequently setting problems for Bulgarian national and international competitions in informatics such as IATI. Also, occasionally setting problems for linguistics competitions, as well as grading the works of competitors.

ONGOING

Various Places

Competitive Programming Lecturer

Occasionally holding lectures on competitive informatics topics such as some advanced algorithms and data structures at various summer schools, academies, etc.

LANGUAGE SKILLS

BULGARIAN	Native
ENGLISH	Fluent
ESPERANTO	Basic
GERMAN	Basic