

Nicholai Dimov

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Education

Washington University in St. Louis

St. Louis, MO

M.S. in Computer Science

B.S. in Computer Science and Mathematics, Minor in Linguistics

Expected May 2024

- Overall GPA 4.00/4.00, Arthur Holly Compton Fellow (Full-tuition merit scholarship), Dean's List all semesters
- Relevant Coursework: Data Structures and Algorithms, Linear Algebra, Modern Algebra, Differential Equations, Probability and Statistics, Systems Software, Time Series Analysis, Optimization, Machine Learning, Number Theory and Cryptography, Financial Mathematics, Programming Systems and Languages, Natural Language Processing, Financial Accounting, Capital Markets and Financial Management

Experience

Matroid Incoming Software Engineering Intern

Palo Alto, CA

- Will work on inference performance modeling on the infrastructure team at an established computer vision startup

Jun — Aug 2023

Meta Software Engineering Intern

Seattle, WA

- Optimized placement of datacenter server racks, ensuring minimized waste of limited power capacity
- Removed manual intervention via novel optimization framework making models easy to write, debug, and reuse
- Improved organization code quality by adding unit tests, streamlining datacenter models, ensuring consistent typing
- Lowered size of mixed integer linear programming model by 40%, reducing computational load of 200+ runs per day

May — Aug 2022

MealMe Software Engineering Intern

San Francisco, CA

- Architected and built REST APIs in Python and Flask that handle 100k+ orders across dozens of food ordering platforms
- Cut customer service usage by 70% with new tooling as revenue increased by 300% over 2 months

Jun — Aug 2021

Washington University in St. Louis Teaching Assistant for CSE 247 (Data Structures and Algorithms)

St. Louis, MO

- Taught students asymptotic analysis as a method to evaluate scalability and effectiveness of solutions to algorithmic problems
- Led interactive group studios, weekly office hours, and graded written lab writeups for this class with 300+ students

Jan — May 2021

II-VI Advanced Materials Research & Development Intern

Pine Brook, NJ

- Performed production flow analysis in Minitab to optimize the acquisition of multimillion-dollar machines

Jun — Aug 2019

Personal Projects

Hanab Live (<https://hanab.live/>)

- Implemented new features, bug fixes, and rectified corrupted database for this multiplayer card game website. TypeScript, Go, Python, SQL

Course Chat Linker (<https://ndimov.com/course-linker>)

- Built website used by hundreds of students to search for, join, and upload group chats for each of their classes. React, Express, Node.JS

Eco2Go Tracker (<https://github.com/ndimov/eco2go-tracker>)

- Winner at Caltech's Hacktech 2021 as best Environment & Sustainability Hack. React, Firebase, Cloud Firestore

Leadership

WashU Puzzle Club President and Founder

St. Louis, MO

- Select and lead diverse activities during weekly meetings that match members' interests in crosswords, logic puzzles, and more
- Organize and manage weekend-long team puzzlehunt competitions

2021 — present

Awards

Putnam – Top 3% on most prestigious university-level proof-based mathematics competition

ICPC – Led team to qualify for 2021 North American Division Championship

Brian Blank Award – Distinguished junior in mathematics

Math Kangaroo – 1st place nationally for 8 years in a row. Invited as 1 of 10 Americans to Zakopane Math Camp in Poland, all expenses paid

USAJMO – 2019 Qualifier, from top 0.05% nationally (250 students)

USACO – Gold Division, ranking in top 500 of pre-college participants nationally

Bloomberg Summer of Puzzles 2020 – 2nd place winner

Skills

Programming Languages – Advanced: Python, Ruby Intermediate: C++, TypeScript, SQL, HTML, CSS Familiar: Racket, Go, Bash

Technologies – Advanced: Git, Linux, \LaTeX Intermediate: Django, React, MongoDB Familiar: AWS, Docker, Express, Firebase, PostgreSQL

Languages – English (native), Bulgarian (native), French (fluent), Dutch (beginner)