GORAZD DIMITROV

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Education

Mines Paris & Paris Dauphine - PSL — Paris, France
M2/MSc. - Modeling, Optimization, Decision, Organization Master (MODO)
- PSL Graduate Excellence Scholarship, class rank: 1st/23

École Polytechnique - IP Paris — Palaiseau, France
M1/MSc. - Parisian Master of Research in Computer Science (MPRI)
- Excellence Scholarship from the French Embassy

École Polytechnique — Palaiseau, France
BSc. Double Major Mathematics and Computer Science
- Excellence Scholarship, GPA: 3.93/4.00, Magna Cum Laude

Relevant courses: Artificial Intelligence and Decision, Machine Learning, Robustness and Uncertainty, Safe Intelligent Systems, Linear Programming, Large Scale Mathematical Optimization, Multiobjective Optimization, Combinatorial Optimization, Preference Modelling, Algorithmic Decision Theory, Advanced Algorithms, Randomization in Computer Science, Algorithms with performance guarantee, Algorithms for Discrete Mathematics, Stochastic Processes, Numerical Linear Algebra, Probability, Statistics...

Experience

Optimization Under Uncertainty Internship (ongoing) — 7 months (2024)
Orange Innovation — *Paris, France*
- Worked in a team focusing on cost optimization for roaming strategies based on year ahead forecasts.
- Project: Robust (worst-case) optimization, and optimization under forecasted data uncertainty.
- Contribution: mixed-integer and bi-level model formulation of the problem, implementation of master-slave and lazy-branching-constraints algorithms (1500+ lines of code) for 20% improvement in speed of optimization.
- Technologies: IBM Cplex solver, Gurobi solver, Julia/JuMP

Forward Deployed Software Engineer (FDSE) Intern — 8 months (2022 & 2023)
Palantir Technologies — *London, UK*
- Worked in multiple projects for two clients: Airbus/Skywise and a world's leading insurance group.
- Projects: Flight disruption handling and automatic generation of resolution scenarios (20+ initial users); IBNR claims prediction and calculation (hundreds potential users); data health/quality governance tool (100+ potential different customers); safe environment management tool (10 initial users).
- Contributions: architecture design and code implementation of 4 solutions in Foundry, ingested or pipelined over 100 datasets, created and presented over 10 demos to clients, lead 3 day workshop on ML model integration, training and usage.

Computer Graphics and Computer Vision Internship — 9 months (2021 & 2023)
INRIA (National Institute for Research in Digital Science and Technology) — *Paris, France*
- Worked on a project aimed at enabling scientists to refine their mental image of animated 3D scene.
- Projects: Real-time high-quality meshing of skeleton-based implicit surfaces; Comparison between 2D sketches and 3D shapes, with shape classification and generation.
- Contributions: improved a state-of-the-art triangulation algorithm for approximating an implicit surface (1600+ lines of code); created algorithm for procedural generation of meaningful shapes and their classification (400+ lines of code); expressive rendering from generated 3D shapes to artificial drawings; database generation; conducted user studies.

Bachelor Thesis Research — 3 months (2022)
INRIA (National Institute for Research in Digital Science and Technology) — *Paris, France*
- Project: Non-Fungible Tokens for prime factorization possession using smart contracts

Deep Learning for Neuroscience Internship — 3 months (2021)
MyBrain Technologies — *Paris, France*
- Project: Exploring Transformers for mental state characterization using EEG data from wearable sensors
- Contribution: research on deep neural networks and transformers applied to electrophysiology (EEG); implementation of BENDR model to existing data and performance comparison; creation of a guide for using BENDR and DN3 on EEG.

Time Series Data Analysis Internship — 3 months (2020)
Elevate Global DOO — *Skopje, Macedonia*
- Project: Data Analysis and Deep Learning (DL) Methods for Electronic Health Records (EHR)
- Contribution: thorough analysis of potential use of Mimic-III Clinical data-set; time series analysis for detection of chronic patients (successfully identified over 80%); creation of vector embeddings for DL models using med2vec and GloVe.

More About Me

Check my personal website (dimitrovgorazd.com) for more information about: the above experiences and technologies used, published papers, personal and academic projects, attendance and awards at international mathematics (IMO) and computer science Olympiads, involvement as a chairmen of an IEEE branch, founder and president of the CS Committee at Polytechnique, co-founder of a facial-recognition startup and more.