Ondrej Vesely

ovesely@college.harvard.edu, https://github.com/veselyo, https://www.linkedin.com/in/ondrejvesely03

Education

Harvard University May 2026, Cambridge, MA

- Bachelor of Arts in Computer Science & Secondary in Neuroscience. Concentration GPA: 3.85/4.0. Cumulative GPA: 3.78/4.0.
- Notable Coursework: Machine Learning, Deep Learning (MIT Graduate). Software Engineering with GenAI, Data Structures and Algorithms, Systems Programming & Machine Organization, Bio & Artificial Intelligence, Computation Abstraction & Design.

Work Experience

Scale AI | Technical Advisor Intern June 2025 – Present, Cambridge, MA

- Designed challenging prompts to test capabilities of Deep Research LLMs; created robust evaluation rubrics to accurately assess model performance, contributing to a high-quality benchmark dataset advancing deep research language models.
- Rewrote failed LLM-generated code and test suites in response to algorithmic prompts, producing correct and comprehensive solutions in Python and C++ for a dataset designed to improve model performance on the Aider Benchmark.

TWT GmbH Science & Innovation| Software Engineer & Data Science Intern June 2025 – Present, Cambridge, MA

- Led the design and development of custom software solutions for enterprise clients (e.g., Mercedes, BMW).
- Authored a research paper on Solution Space Engineering, an optimization framework for identifying the largest region in parameter space where all designs satisfy performance constraints; implemented the full algorithm in Python.
- Built a code similarity tool that models codebases as graphs and computes edit distances to detect related regions across large systems, aiding change propagation and refactoring.
- Developed a patent copilot tool that identifies existing patents similar to a given concept using semantic search and custom similarity metrics, helping R&D teams assess novelty and avoid duplication.
- Co-authored a publication for the “Driving the Future” symposium (Technical University of Munich), an AI-driven adaptive interior system for autonomous vehicles.

Laptis | Software Engineer Intern Jan 2025 – May 2025, Cambridge, MA

- Built a conversational agent to automate patient intake at substance use disorder treatment centers; used Bland.AI, Flask, and Firebase to manage calls, collect screening data, and store it securely.
- Evaluated performance using an adapted, research-backed 3-bot framework, with GPT-4o simulating diverse patient personas and serving as evaluator; achieved 100% accuracy across all criteria, demonstrating deployment readiness.

Verdad | Software Engineer Intern Feb 2024 – Mar 2024, Cambridge, MA

- Reduced backtest runtime by 92% by redesigning a Python-based portfolio optimization script to run annual simulations in parallel, enabling scalable performance across the full equity universe while preserving accuracy.
- Refactored CVXPY-based optimization logic to decouple yearly dependencies by resetting portfolio weights each January 1; stitched yearly results to replicate sequential logic with negligible degradation in Sharpe ratio.
- Explored parameter tuning, solver threading (MOSEK), and backtest overfitting risks; authored an independent research paper on integrating modern portfolio theory with practical optimization and backtesting methods.

Projects

Gnome | Co-Founder & Software Development Lead Mar 2025 - Present

- Led development of an AI-powered file management application that enables natural language search and automatic organization across local and cloud storage (Google Drive, etc.), following the full software development lifecycle (SDLC).
- Developed the semantic search feature; designed a Python backend to parse file contents, generate embeddings, and retrieve results via vector similarity; integrated with a React frontend. Built the intelligent organization feature using an LLM to automatically rename and sort files into personalized folder schemas based on content analysis.

LoLDuo | Personal Project June 2025 - Present

- Developed a full-stack web application that tracks and visualizes performance with specific teammates in League of Legends and Teamfight Tactics, enabling players to analyze match history and shared statistics.
- Engineered a Python backend utilizing asynchronous calls to the Riot Games API to efficiently fetch and preprocess match data; implemented relational SQL storage for optimized querying. Designed a Vue.js frontend to present shared performance statistics in a clear and interactive dashboard, enabling users to explore trends, metrics, and match history over time.

Skills

- **Languages & Frameworks:** Python, C++, JavaScript, OCaml, SQL, Flask, React.js, Vue.js, CVXPY, HTML/CSS.
- **Tools & Platforms:** Git, Docker, AWS, Firebase, GCP, CI/CD, Joern, MOSEK.

Leadership & Activities

Harvard Track & Field | Varsity Athlete May 2022 – Present, Cambridge, MA

- Committed 20 hours a week to strenuous training as a 400m hurdler. Travelled extensively and competed at the highest collegiate level whilst maintaining a rigorous academic load and semester-time internships.
- NCAA Division I All-Academic Athlete (2023, 2024); Second Team All-Ivy (2023). Ranked second all-time in Harvard history in the 400m hurdles. Czech National U23 Champion, national record holder; six-time national medalist in total. Represented Czech Republic at numerous international competitions, including two Top 8 finishes at the World U20 Championships.

Harvard Czech and Slovak Club | Co-Founder and Board Member September 2024 – Present, Cambridge, MA

- Planned and launched Harvard’s first Czech and Slovak club, and now steer strategy, growth, and cultural events.