Vlad Miricioiu

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Hi, I'm Vlad. I work on protecting the Open Source infrastructure the world depends on.

My experience at a glance:

Software Stewardship Lab — *Founder*
Managing a non-profit applied research lab making Open Source infrastructure sustainable.

Open Source Pledge — *Director*
Raised $9,780,672 for Open Source maintainers.

ecosyste.ms — *Revenue & Data Wrangler*
Helping build the world's largest public-access dataset on Open Source ecosystems.

NYU Software Supply Chain Security Operations Center — *Co-director*
Supervising software security master's students towards making impactful contributions.

Sentry — *Open Source Adviser*
Managed a distribution of $1,000,000 to Open Source developers and foundations.

Open Source Endowment — *Founding Adviser*
Helped decide how to spend an endowment fund at a $768,000 principal.

thanks.dev — *Core Developer*
Built software used by companies to analyse and fund their dependency graphs.

Gates Foundation — *Contracting Developer*
Built software used to allocate $1 billion in global healthcare funding.

Hare — *Maintainer*
Created the regular expression engine for the Hare programming language.

Saffron — *Co-founder, Head of Software*
Founded a software consulting company and ran it for 10 years.

I am an expert in Open Source sustainability, Open Source metadata and funding, and software supply chains. I also have 19 years of experience spread across low-level programming, performance optimisation, 3D graphics, web technologies of all types, compilers and C.

I am good at quickly and thoroughly understanding complex, technical topics.

I live in Edinburgh, Scotland. I changed my name in 2026, from *Vlad-Stefan Harbuz*.

PROFESSIONAL EXPERIENCE

Software Stewardship Lab

Feb 2026–present

Founder, Executive Director

In 2026, I founded the Software Stewardship Lab, a new non-profit applied research lab dedicated to ensuring the stability of the global Open Source ecosystem we all rely on. More details are available on our website.

I have been interviewed about our work on the Sustain podcast and MonkCast, given a keynote about software sustainability at Community Over Code Glasgow 2026, and spoken about my work on phantom dependencies at EuroPython 2026 and FOSDEM 2026.

Open Source Pledge

Jun 2024–present

Director

I lead the Open Source Pledge, an initiative which aims to get companies to pay the maintainers of the Open Source software they depend on. In doing so, we aim to correct the dramatic underfunding of Open Source software, which leads to maintainer burnout and serious security issues on a global scale. We have raised $9,780,672 for Open Source maintainers.

I developed most of the software the Pledge relies on, liaised with decision makers at prominent tech companies, and developed and promoted the philosophy of the Pledge together with my collaborators. My work has also involved creating innovative Open Source supply chain analysis software, video content, and 3D graphics, and supervising psychological research.

My work on the Pledge has been publicly praised by the Open Source Initiative, the PHP Foundation, Open Source Collective, Ruby Central, the Perl and Raku Foundation, the Django Software Foundation, venture capital firm Accel, the creators of ESLint, Vue.js, and others. The Pledge has been featured on the Nasdaq screen in Times Square three times (1, 2, 3). I have been interviewed on MonkCast, the Sustain podcast, Open Source Security and in the SF Gazetteer, and my work has been covered by TechCrunch, GitHub, The New Stack, IEEE Spectrum, Theo at t3.gg, The Register (1, 2, 3), Forkable (1, 2, 3), and taught in classes at Columbia University.

ecosyste.ms

Nov 2026–present

Revenue & Data Wrangler

ecosyste.ms is the world's largest public-access dataset on Open Source ecosystems, indexing 16.6 million packages, 357 million repositories, and 25.8 billion dependency edges. It's used by organisations including Microsoft, the Sovereign Tech Agency, and the French government. I focus on growing ecosyste.ms's revenue and ensuring the quality of its data, which I do by working across development, design and messaging.

NYU Software Supply Chain Security Operations Center

Jun 2026–present

Co-director

I am one of the founding co-directors of NYU NSOC, a research lab embedded within NYU Tandon that educates master's students on software supply chain security and guides them towards making impactful and respectful security contributions to the Open Source ecoystem. Our directors and researchers also collaborate to create research reports, compile software supply chain data, and put together educational resources, all of which are made freely available to the community.

Sentry

May 2026–Dec 2026

Open Source Adviser

Every year, Sentry sends a large amount of money to Open Source developers and foundations, which is a large logistical undertaking. I was in charge of coordinating Sentry's 2026 distribution, which was their biggest yet, at $1,000,000.

To figure out the most impactful projects to send this money to, I carried out a supply chain composition analysis, to identify: software that Sentry directly depends on; critical software in ecosystems that Sentry uses; and critical package management infrastructure maintained by FOSS foundations; to which I added manual nominations from Sentry employeees.

I was able to surpass the reach of existing analyses by appliying research I had done as part of the Software Stewardship Lab to identify phantom dependencies that are invisible to normal tools. Planning these payments also allowed me to develop relationships with prominent Open Source projects and foundations. The complete details of the $1m distribution are available here.

Open Source Endowment

Apr 2025–present

Adviser to the Board

I serve as an adviser to the board of the Open Source Endowment, the first ever endowment to target Open Source software. The Endowment's aim is to mitigate the Open Source sustainability crisis by funding the work of keystone maintainers. My role has involved giving advice on the underlying fund allocation model, developing Open Source supply chain analysis software, and helping refine the philosophy of the Endowment. The Endowment currently holds around $768,000, which we have raised from prominent members of the software community. My work on the Endowment has been covered by TechCrunch and The Register.

thanks.dev

Aug 2024–Feb 2025

Core Developer

I was a core developer of thanks.dev, a service that enables companies to analyse their codebases in order to determine which Open Source maintainers they depend on, then pay those maintainers for their work. This service, which is making a big impact on the state of Open Source funding,

is unique in its transparency and ease of use. As part of my work on thanks.dev, I've had to write code that processes millions of lines of code worth of private codebases, while ensuring that code analysis and payment flows are always intuitive for users. My work is relied on by large companies such as Canonical, Square, Sentry, and others.

Saffron

2012–2022

Co-founder, Head of Software

In 2012, I founded Saffron, a software development company, together with my business partner. Despite starting with no funding, I played an instrumental part in growing Saffron to a company with over £400,000 in yearly revenue, offices in Romania, Switzerland and the Netherlands, and 12 employees. Our main focus was data visualisation software for scientific data, as well as web applications. Across a decade, I was responsible for the technical architecture of all of our projects, and worked closely with our team on the projects' development. This required me to have expert-level knowledge of web and scientific programming, Python, Javascript, and many other technologies. I also mentored around 25 employees in total, teaching programmers of all experience levels from first principles. I led work on over 30 projects, including:

- **50five & Ajusto**: I coordinated all technical aspects of a 6-year-long effort funded by multinational energy company Engie to build a home services application for the Netherlands, Belgium, the UK and Romania. I built large swaths of backend, frontend and mobile software to be used across all deployments of the service, architected time-critical systems such as scheduling and invoicing together with the client and rolled out the necessary infrastructure. My leadership role involved coordinating around 50 international collaborators and stakeholders. This project alone attracted over £1m in revenue, and the software I architected is still active in Belgium and the Netherlands, having been used by over 10,000 customers.
- **ICGenealogy**: In collaboration with the Centre for Neural Circuits and Behaviour at the University of Oxford and the Laboratory of Computational Neuroscience at the EPFL, I developed a piece of software for visualising ion channels, a kind of neuroscience research data. Because this project was to be used in cutting-edge research at dozens of universities worldwide, its development required me to combine scientific programming expertise with user-friendly architecture and interfaces. A professor in Computational Neuroscience at the University of Cambridge described my work as having "a level of UI sophistication and user-friendliness that is simply unprecedented in our field".
- **Optima**: I worked together with researchers from the Optima Consortium for Decision Science to help them build Open Source data science tools that help decision-makers choose the best public health investments. My work allowed researchers to adapt code to different diseases roughly 10 times faster than before. The Optima model has been used in around 40 countries, most significantly by the Gates Foundation, and has been used to make decisions on how to allocate roughly US$1 billion of funding across different health priorities, including HIV, tuberculosis, nutrition, and malaria.

- Other clients I've worked with include the Swiss Post, the University of Copenhagen, GlaxoSmithKline, the Burnet Institute, and the Romanian Government.

Submodule

2018–2022

Co-founder, Head of Software

At Submodule, my co-founder and I built the GB01, a device that allows users to manage, Nintendo Game Boy video game cartridges using a modern interface. This project was technically demanding as it required me to develop both a cross-platform desktop application and embedded C software on the device itself. The GB01 has been purchased by over a thousand customers and positively reviewed online.

Keep Things Open

Apr 2026–May 2026

Co-creator

On 29 Apr 2026, it emerged that the NHS was about to abandon its decades-long commitment to open-sourcing its publicly-funded software. I co-authored this open letter asking them to reconsider, which was featured in New Scientist, The Register and the HSJ, was signed by over 1000 people, and was promoted by former Health Secretary Matt Hancock and author Cory Doctorow.

Clumsy Computer

2020–present

Host

Due to my frustration with the shortcomings of current programming resources, I started a Twitch and YouTube channel called *Clumsy Computer* in 2020. On this channel, I teach programming from first principles based on a "from scratch" approach, which enables students to understand fundamentals of software more deeply. *Clumsy Computer* has received strong praise from learners.

Open Source Contributor

Here is a selection of my Open Source contributions:

- I am one of the maintainers of the Hare programming language. My contributions include a regular expression engine written from scratch that offers better performance than those of programming languages such as Python or Javascript, comprehensive mathematical programming tools, date/time arithmetic, 2D and 3D graphics libraries, a linear algebra library, neural networks, as well as other contributions to the language such as tuple unpacking. My work has enabled programmers to use the Hare language for 2D/3D graphics and numerical/scientific programming. I also serve a technical leadership role in my areas of technical expertise, and previously served a cultural leadership role, guiding over 100 contributors. Hare has been covered in The Register.

- I have made significant contributions to Sciris, a scientific Python library used by hundreds of researchers, including in one of the most widely adopted models of COVID-19. I have also contributed to Atomica, a simulation engine for compartmental models which can be used to simulate disease epidemics and health care cascades. This work is currently in use by the Gates Foundation as part of their internal portfolio management tools.
- I am the primary maintainer of mpld3, a scientific data visualisation tool originally developed by Google researcher Jake Vanderplas. mpld3 is among the top 0.6% of the most downloaded Python packages on PyPI, with over 13 million downloads.
- I have contributed to Sourcehut, a prominent Open Source hacker forge, providing code hosting and other services to over 40,000 users. My contributions have included new features such as license support in Git repositories.
- I made the peony game engine, a research project in building a full-featured 3D video game engine entirely from scratch in C++. My work on this game engine has been used for educational purposes by students at top USA universities, and featured in a PhD thesis.

PUBLICATIONS AND TALKS

Peer-Reviewed Papers

- Kerr CC, Sanz-Leon P, Abeysuriya R, Chadderdon GL, **Harbuz VS**, Saidi P, del Mar Quiroga M, Martin-Hughes R, Kelly SL, Cohen JA, Stuart RM, Nachesa A. *Sciris: Simplifying scientific software in Python*. The Journal of Open-Source Software 2023, 8(88), 5076.
- Kedziora DJ, Abeysuriya R, Kerr CC, Chadderdon GL, **Harbuz VS**, Metzger S, Wilson DP, Stuart RM. *The Cascade Analysis Tool: software to analyze and optimize care cascades*. Gates Open Research 2019 3:1488.

Contributions to Peer-Reviewed Papers

- Podlaski WF, Seeholzer A, Groschner LN, Miesenböck G, Ranjan R, Vogels TP. *Mapping the function of neuronal ion channels in model and experiment*. eLife 2017 6:e22152.

Other Publications

- Anticipations Summer 2023 — 17 Jul 2023
  Long-Term Members of our Communities Should Be Able to Vote

Talks

- Community Over Code Keynote, ~150 attendees — Glasgow, 13 Oct 2026
  Unmasking Phantoms in our Supply Chains

- EuroPython ~150 attendees — Kraków, 16 Jul 2026
  Binary Dependencies: Identifying the Hidden Packages We All Depend On
- FOSDEM ~150 attendees — Brussels, 31 Jan 2026
  Binary Dependencies: Identifying the Hidden Packages We All Depend On
- PPE Society — London, 17 Jul 2025
  The Hidden Non-Market Workers That Keep Markets Going: Why Companies Should Pay Open Source Maintainers
- The Association for Social and Political Philosophy — Glasgow, 15 Jul 2025
  The Hidden Non-Market Workers That Keep Markets Going: Why Companies Should Pay Open Source Maintainers
- AltCtrlOrg Invited, >200 attendees — Basel, 06 Feb 2025
  Open Source: Deceptive Power or Collective Governance?
- FOSDEM ~100 attendees — Brussels, 02 Feb 2025
  Why and How Companies Should Pay Open Source Maintainers
- Statistical Office of Basel, Switzerland Invited, ~50 attendees — Basel, 19 Apr 2019
  Ways to Tell a Story With Data Visualisation

Selected Media Appearances

- MonkCast — 29 Oct 2026
  Vlad Miricioiu on the Software Stewardship Lab: Binary Dependencies, Burnout, & the Bernies
- Sustain — 07 Aug 2026
  Launching the Software Stewardship Lab
- Health Service Journal — 06 May 2026
  NHSE locks down 'open source' code over Mythos AI fears
- New Scientist — 05 May 2026
  Backlash builds over NHS plan to hide source code from AI hacking risk
- Open Source Security — 27 Apr 2026
  Open Source Pledge with Vlad-Stefan Harbuz
- Gazetteer SF — 24 Oct 2024
  Wild billboards around the Bay call attention to tech companies free-loading off open source projects

Education

- **PhD Philosophy**, University of Edinburgh 2024-2028
  I research the ethics and epistemology of Open Source software. I am also interested in ideology, and I run the Ideology Research Group. My committee chair is Berislav Marušić, and the other members of my committee are Barry Maguire and Matthew Chrisman.
  Areas of specialisation: Epistemology, Political and Social Philosophy.
  Areas of competence: Philosophy of Language.
- **MScR Philosophy** (Distinction), University of Edinburgh 2023-2024
  In my thesis, *Practical Belief and Epistemic Alienation*, I argued that we can believe not only for factual reasons, but also for practical reasons, ie because believing would bring about a favourable outcome. I explained that this can lead to epistemic alienation. My thesis received a Distinction, the highest mark available, and was examined by Berislav Marušić and Robin McKenna. My supervisor was Barry Maguire.
- **MA Philosophy** (Merit), University College London 2022-2023
  In writing my thesis, titled "Epistemic Alienation", I researched the philosophy of work and how self-alienation makes us epistemically blind to choices we would otherwise be able to make, and described this using Fricker's idea of epistemic injustice. My supervisor was Han van Wietmarschen.
- **MSc Computational Biology and Bioinformatics** (not completed) 2019–2020
  ETH Zürich & Universität Basel
  Relevant courses: Advanced Machine Learning, Biofluiddynamics, Cell and Molecular Biology, Computational Biology, Data Mining, Spatio-Temporal Modelling in Biology. I left this two-year programme after one year to pursue other work.
- **BSc Computer Science** (First Class), The University of Manchester 2013-2016
  Relevant courses: Machine Learning and Optimisation, AI and Games, Symbolic AI, Advanced Computer Graphics, Computer Vision, Compilers, Operating Systems, Natural Language Systems. My Final Year Project was entitled "Modelling Classical Music with Machine Learning", supervised by Allan Ramsay.

I've also studied linguistics for a term at the University of Basel with Heike Behrens, and classical composition and music theory for a year as part of unmatriculated studies at the Musik-Akademie Basel. I speak native English and Romanian, fluent German and intermediate Japanese.