



dr. Matic Broz

Innovation isn't breaking the rules; it's writing new ones

I'm a computational biochemist and developer from Slovenia. I make AI tools for protein research available to everyone, and I help creators make informed decisions about creative software.

What I'm building

- **[ProteinIQ.io](#)**: A Next.js-based platform that allows anyone to use state-of-the-art biochem tools. No need to buy expensive GPUs or learn how to deploy models to the cloud. At ProteinIQ, everything works out of the box.
- **[Photutorial](#)**: Product recommendation service for creatives. Founded in 2020, we've reached 50+ million creators across 130+ countries, publishing 270+ expert reviews to help people choose the right creative tools.

Professional experience

- Founder of Photutorial and ProteinIQ.io (2020–present)
- ERASMUS+ Research Traineeship at University of Natural Resources and Life Sciences, Vienna (Jun 2022–Oct 2022)
- Online image licensing consulting (2022–present; intermittent)
- Research assistant & PhD Student at FKKT UM (2019–2023)

- Analytical laboratory technician at Cinkarna (2013–2018; seasonal)

Skills

- **Molecular dynamics simulations:** CHARMM, GROMOS, NAMD, VMD
- **Biochem software:** PyMOL, ChimeraX, Rosetta
- **Data analysis & scientific computing:** Python (NumPy, Pandas, Matplotlib, Seaborn), Excel, statistical analysis
- **Machine learning & AI:** PyTorch, TensorFlow, Scikit-learn, Keras, model training and evaluation
- **Web development:** React/Next.js, TypeScript/JavaScript, CSS (vanilla, Tailwind), PHP (WordPress), Python backends
- **DevOps & infrastructure:** Docker, container orchestration, cloud deployment (AWS, GCP), CI/CD
- **Photography & design:** Photoshop, Lightroom, Inkscape, advanced IP licensing
- **Content & marketing:** SEO, technical writing, scientific communication

Publications

- Broz M, Oostenbrink C, Bren U. The Effect of Microwaves on Protein Structure: Molecular Dynamics Approach. *J Chem Inf Model*. 2024 Mar 25;64(6):2077-2083. doi: 10.1021/acs.jcim.3c01937. Epub 2024 Mar 13. PMID: 38477115; PMCID: PMC10966651.
- Broz M, Jukič M, Bren U. Naive Prediction of Protein Backbone Phi and Psi Dihedral Angles Using Deep Learning. *Molecules*. 2023 Oct 12;28(20):7046. doi: 10.3390/molecules28207046. PMID: 37894526; PMCID: PMC10609058.

- Broz M, Furlan V, Lešnik S, Jukič M, Bren U. The Effect of the Ala16Val Mutation on the Secondary Structure of the Manganese Superoxide Dismutase Mitochondrial Targeting Sequence. *Antioxidants (Basel)*. 2022 Nov 27;11(12):2348. doi: 10.3390/antiox11122348. PMID: 36552556; PMCID: PMC9774195.
- Broz M, Kolarič A, Jukič M, Bren U. Neuropilin (NRPs) Related Pathological Conditions and Their Modulators. *Int J Mol Sci*. 2022 Jul 29;23(15):8402. doi: 10.3390/ijms23158402. PMID: 35955539; PMCID: PMC9368954.

Contact

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