

Jernej Zupančič

Dependable data/software engineer with 7+ years experience with programming, machine learning, metaheuristic optimization, web technologies, continuous integration, scientific writing and project management. Substantial knowledge of applying artificial intelligence technology on the real-world and research problems and bringing it to production level through web APIs. Strong desire to learn and grow professionally and personally.

Experience

2020 – present **Freelancer**

INTELLIGIT Jernej Zupančič s.p.

- Data engineering and data applications for real-life problem solving

2013 – 2020 **Research Assistant**

Jožef Stefan Institute, Department of Intelligent Systems, Ljubljana

- Greatly contributed to the design and development of several applications that leverage **artificial intelligence technologies**:
 - **Natural language** – chatbots, FAQ bot, relevant text search, voice control (Slovenian, English)
 - Developing **machine learning models and pipelines**: detecting whether a student will require help based on the student records; detecting the movement speed of a rod using gyroscope and accelerometers; detecting whether a part of the text in an email was written by a human or is part of email-client generated text or signature; detecting known entities from free-text
 - **Optimization** of steel casting process, wind-turbine design, hearth simulator tuning, real-world problems with constraints
 - **Development** of heat-pump simulator and smart-house with smart appliances, solar panels and electric energy storage with smart control, web applications (Python, Flask, Django, Scikit-learn, pandas, Numpy, Matplotlib, PostgreSQL, Javascript, ReactJS, Linux, Docker, static site generators)
- Pioneered and promoted **software best practices** at the department level (git, Docker, testing, continuous integration, code reviews)
- Adapted experiments for **distributed computing** on a grid
- **Mentored 15+ students** working on various projects
- Greatly contributed to the successful project **application proposal writing**, e.g., AS-IT-IC (<https://as-it-ic.ijs.si/>) – € 700.000, ISE-EMH – € 750.000
- **Operationally managed** national and international projects, e.g., AS-IT-IC project (finances, reports, deliverable, implementation)
- Written or contributed to several **research journal or conference papers** – <http://bit.ly/3leMUxz-cobiss-jernej>

2011 – 2013 **Teaching assistant (student work)**

Faculty of Mathematics and Physics, Ljubljana

- Lab assignments in the introductory computer science course

Skills

Software engineering – 3/5
Python programming – 4/5
ML & data analysis – 4/5
Multi/single objective optimization - 4/5
Web development – 3/5
Scientific writing – 3/5
Mathematics – 4/5
Mentoring – 4/5
Managing – 3/5
Linux – 3/5
System administration – 2/5

Languages

English – C1 (reading, hearing, speaking, writing)

Interests

- Quality family time
- Self-improvement
- Useful software

Personal info

Website:

<https://jernejzupancic.si>

LinkedIn:

<https://si.linkedin.com/in/jernej-zupan%C4%8Di%C4%8D-2171a5167>

Education

2013 – present PhD in Information and Communication technologies

Jožef Stefan International Postgraduate School, Jamova 39, 1000 Ljubljana, Slovenia

- Machine learning
- Optimization (evolutionary optimization, multiobjective optimization)
- Scientific writing
- Intelligent agents and business intelligence

2007 – 2013 Masters in Mathematics and Professor of Mathematics

Faculty of Mathematics and Physics, Jadranska 19, 1000 Ljubljana, Slovenia

- Computational mathematics (optimization, computability)
- Discrete mathematics (graph theory, applied discrete mathematics)
- Numerical mathematics (computer aided geometry design, approximation and interpolation)
- Financial mathematics (game theory, macro economy, geometry)
- Education (didactics, pedagogy with andragogy, psychology of teaching and learning)

2003 – 2007 High school graduate

Novo mesto General Grammar School

- Achieved several golden plaque awards in mathematics and chemistry
- Graduated with the golden graduate achievement