

Resume

PERSONAL INFORMATION

First name / Surname: Piotr Migdał
E-mail: pmigdal@gmail.com
Homepage: <http://p.migdal.pl>
Profiles: [GitHub](#), [StackExchange](#), [LinkedIn](#)

HOW AM I?

A data scientist (data analysis, machine learning and data visualization), with scientific background (PhD in quantum optics theory).

EXPERIENCE

- Chief Data Science Instructor at [deepsense.io](#) Jul 2015–
— designing workshops, creating material and being an instructor
— lead workshops in: machine learning (scikit-learn, xgboost), data visualization (D3.js), big data (Spark), deep learning (Theano, Keras)
— ticketed workshops: San Francisco, New York and London
— for companies: [Newegg](#), [Intel](#) and others
- Freelancing in data analysis and data visualization Jan 2014–
— for companies: [Startup Compass](#), [Data4Cure](#), [LaboratoriumEE](#) and others
- Data Science Intern at [Startup Compass](#), San Francisco, CA, USA Jul–Oct 2013
— designing distance function for software companies, based on a multidimensional dataset
— data processing (Python: SciPy, Pandas; MongoDB), data exploration (Gephi, D3.js)
- Participated in [BigDive](#), a 4-week long data science training Oct 2012

RESEARCH

- **Related expertise:** quantum physics, statistical mechanics, graph theory, complex systems, complex networks, information theory, collective decision-making, mathematical psychology
- **Internships at:** ISI Foundation (Italy), ICFO (Spain), Univ. of Toruń (Poland), MIT (USA)
- **Research papers:** [12 publications](#), [10 available openly on arXiv](#)

EDUCATION

- ICFO - The Institute of Photonic Sciences, Castelldefels (Barcelona), Spain 2011–2014
- **PhD Degree**, *cum laude*; advisor: prof. Maciej Lewenstein
thesis: [Symmetries and self-similarity of many-body wavefunctions](#).
- University of Warsaw, Warsaw, Poland (MISMaP program) 2005–2011
- **MSc in Theoretical Physics** (grade: 5/5), **BSc in Mathematics (Game Theory)** (grade: 5/5)

TEACHING GIFTED HIGH-SCHOOL STUDENTS

- Courses on: quantum mechanics and cryptography, simulating social phenomena in Python, measuring fractal dimension from images, Fourier analysis and waves
- Voluntary tutor of the [Polish Children's Fund](#) 2006–
- Mentor of the winners of the [21st European Union Contest for Young Scientists](#) 2009

PROJECTS, ACTIVITIES

- Designing and developing [Quantum Game](#) (JavaScript ES6) May 2015–
- [TagOverflow](#) – an interactive graph of Stack Exchange tags Mar 2015
- Designed and lead an intensive one-week training [Data Analysis Summer School in Python](#) for sociologists and psychologists Jul 2015
- Started an unconference series [Offtopicarium](#) 2012–
- The head organizer of a national physics student's conference VII OSKNF 2008
- Founded a student's association [SKFiz UW](#) 2006

AWARDS, SCHOLARSHIPS

- Personal grant for Matura Exam Data Analysis from DELab UW Apr 2015
- ICFO Innovation Fund grant awarded for startup Confrenzy Oct 2011
- National Scholarship for exceptional achievements in science 2007–2010
- [Research Science Institute](#) (Massachusetts Institute of Technology, MA, USA) 2005
- Bronze Medal in the International Physics Olympiad (Pohang, South Korea) 2004

SKILLS

- Languages: Polish (native), English (fluent)
- Programming languages/technologies: Python (data science stack: Jupyter Notebook, NumPy, SciPy, Pandas, scikit-learn, Keras), JavaScript (D3.js), R (ggplot2, dplyr, mirt, party), SQL, MongoDB, LaTeX, Git