Resume

PERSONAL INFORMATION	First name / Surname:	Piotr Migdał
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	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

- Freelancing in data analysis and data visualization — Jan 2014–
  — for companies: Codilime, Startup Compass, Data4Cure, LaboratoriumEE and others
  — an example project: Szkolomat for projekt:polska — data consulting, data cleaning and merging, geocoding
- Data Science Instructor at Deepsense.io — Jul 2015–
  — designing workshops, creating material and being an instructor
  — 2-day trainings in machine learning and big data in San Francisco, New York and London
- Data Science Intern at Startup Compas, 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; a video abstract for Qubism

EDUCATION

ICFO - The Institute of Photonic Sciences, Castelldefels (Barcelona), Spain — 2011–2014
- **PhD Degree**, *cum laude*; advisor: prof. Maciej Lewenstein — Dec 2014
  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
- Scholarship of the Polish Children's Fund — 2003–2005
- 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), JavaScript (D3.js), R (ggplot2, dplyr, mirt, party), Mathematica, MongoDB, LaTeX, Git