



Piotr Zacha

I am a graduate of the Warsaw University of Technology, where I obtained a master's degree in mechatronics engineering. I've been programming for years. During my studies, I was dealing, among others, with image processing, mainly in C++. Currently, I focused on developing my Python projects covering web-development (Django, Flask), mathematical modeling (NumPy, Matplotlib) and data processing (Pandas, Jupyter Notebook). After gaining experience as an application engineer at FEV Polska, I decided to continue career in the IT industry.

While still a student, I started working at the Space Research Center of the Polish Academy of Sciences. I also participated in international training covering the subject of current research in the conditions of microgravity and hypergravity organized by the European Space Agency.

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 [portfolio](#)

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WORK EXPERIENCE

Software Application Engineer

FEV Polska

10/2018 – 02/2020

Cracow, Poland

- Development and implementation of MORPHEE automation system components for engines and vehicles test benches,
- development of Simulink model,
- working alongside German customer (on/off-site),
- participation in Polish-German-French projects,
- commissioning the projects (hardware and software tests),
- working in international environment.

Intern Engineer

Space Research Centre of the Polish Academy of Sciences

04/2017 – 08/2018

Warsaw, Poland

Space Mechatronics and Robotics Laboratory

- Analysis of the impact of flexible antenna (part of Radio Frequency Analyser, used, among others, in [JUICE](#) and Chang'E-4 projects) on the dynamics of a spacecraft - creating a mathematical model,
- Matlab and Simulink simulations,
- comparing results with laboratory experiments,
- modeling of mechanical elements (Inventor) – [JUICE](#) project.

Contact: Tomasz Barciński, PhD – tbarcinski@cbk.waw.pl, +48 22 4966

Student internship

Space Research Centre of the Polish Academy of Sciences

07/2016

Warsaw, Poland

Laboratory of Photonics and Micromechanics

Research and analysis of compact Fourier spectrometers.

Contact: Mirosław Rataj, PhD – rataj@cbk.waw.pl

Founding member

Stowarzyszenie Port Szczecin

09/2017

Szczecin, Poland

Organizing cultural events. Among others, it included:

- coordination of events,
- establishing cooperation with partners,
- member of the audit committee.

Contact: mgr Justyna Majzel – stowarzyszenieportszczecin@gmail.com

SKILLS

Programming

Python, C++, Matlab

Data Science

SQL, NumPy, Matplotlib, Pandas, Jupyter Notebook

Web Development

Django, Flask, Bootstrap, CSS, HTML

Other

Confluence, JIRA, Git

FOREIGN LANGUAGES

English



German



EDUCATION

Warsaw University of Technology

BSc and MSc in Mechatronics (full-time), specialization: Photonics Engineering

10/2013 – 07/2018

- MSc thesis: Analysis of the impact of flexible antenna on the dynamics of a spacecraft – in association with SRC PAN.
- BSc thesis: Analysis and modeling of compact Fourier spectrometers.

European Space Agency

ESA/ELGRA Gravity-Related Research Summer School 2017

06/2017

ESEC, Belgium

Week-long international summer school. It offered an overview of current research under microgravity and hypergravity conditions in both life and physical sciences.

SOFTWARE PROJECTS

[Event calendar](#)

App that allows to view and manage cultural events. (Django, Bootstrap, HTML)

[Solar system model](#)

2D Solar system model. User can add additional objects to simulation. (NumPy, Matplotlib, Tkinter)

[Blog](#)

(Flask, Bootstrap, SQLAlchemy, HTML)