# ALEX OSTAPENKO

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## WORK EXPERIENCE

### Data Scientist
**D2A Analytics**

📅 June 2023 – Present            📍 Toronto, ON

Performed **data analysis** and business consulting services for non-profit organizations.

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### Research Assistant
**the University of British Columbia**

📅 September 2021 – Present       📍 Vancouver, BC

- Performed **image analysis** of Radio and X-ray **telescopes** data using Python tools to discover properties of the intracluster gas in galaxy clusters. This involved working with an archival database, running simulations, **analysis of images, modeling, and building a processing pipeline.**
- **Developed a python package** (adpipy) to perform statistical analysis and visualization of data cube images.
- Designed **observation proposal** for **Radio interferometer** telescope.

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### Science-Policy Research Assistant
**the University of British Columbia**

📅 September 2022 – May 2023      📍 Vancouver, BC

- Estimated the **impact of satellites** and debris re-entry on Earth's atmosphere.
- Provided **light pollution policy regulation**: project of IAU Center for the protection of the Dark and Quite Skies from Satellite Constellation Interference and Outer Space Institute.
- Estimated quality of **FCC licensing** (mostly **spectrum granting**).

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### Teacher Assistant of Astrobiology class
**the University of British Columbia**

📅 Sept 2021 – May 2022           📍 Vancouver, BC

- Provided office hours for more than 70 undergraduate students, and graded homework and exams.

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### Intern
**Astronomical Observatory of the Jagiellonian University**

📅 July 2019, July 2020           📍 Kraków, Poland

- Performed time series and image analysis to study the active galactic nuclei and properties of the galaxies' interactions.

## EDUCATION

### Master of Science in Astronomy
**the University of British Columbia**

📅 Sept 2021– Present             📍 Vancouver, BC

### B.Sc. in Physics and Astronomy
**Taras Shevchenko National University of Kyiv**

📅 2017 – 2021                    📍 Kyiv, Ukraine

## SKILLS AND TOOLS

- **Python** (i.e. numpy, scipy, pandas, matplotlib, shapely, astropy ...)
- **Tableau**, **SQL**
- **R** (i.e. ggplot2, FITSio, dplyr ...)
- **Remote Computing (ssh), Terminal command line, Bash Scripting**
- **Microsoft Office tools** (Excel, PowerPoint, PowerBI, Word ...)
- **Version Control (Git)**, **Jupiter Notebook**
- **HTML/CSS**
- **Latex**, **Wolfram Mathematica**

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- **Project managment** Successfully combined several research projects, teaching, and management of administrative tasks.
- **Problem-solving** In course of my studies successfully solved multiple diverse scientific, technical, and management problems.
- **Public Presentation** Presented my research at multiple international scientific conferences to an audience of more than 50 people.
- **Event organizing** Organized scientific conferences, festival of innovations, and music events for more than 500 participants.

## PUBLIC TALKS

- Oral presentation at *CASCA 2023 AGM* with work 'Studying the Intracluster Medium properties of MS0451 with ALMA'.
- Publication:  **O. Ostapenko**, M. Tarnopolski, N. Żywucka, J. Pascual-Granado (2020) Searching for signatures of chaos in gamma-ray light curves of selected Fermi-LAT blazars. Monthly Notices of the Royal Astronomical Society.
- 3-Minute Thesis Presentation: Life in the Universe? Galaxy Cluster Gas Holds the Answers.
- Oral presentations at *Galaxy seminar Institut d'Astrophysique de Paris 2023*.
- Oral presentations at *YMCA Institut d'Astrophysique de Paris*: A multi-wavelength study of the intracluster medium in the MS0451 galaxy cluster using ALMA and Chandra observations.
- Poster presentation at *CASCA 2021* with work 'Searching for Signatures of Chaos in Gamma-ray Light Curves of Selected Fermi/LAT Blazars'.
- 2 Oral presentations at $27^{th}$ *Young Scientists' Conference on Astronomy and Space Physics*: 'Investigation of the detectability of bright GRBs in TeV range with future neutrino observatories' and 'Signatures of Chaos in Gamma-ray Light Curves of Selected Fermi/LAT Blazars'.