



# ANGELA KOCHOSKA

Astrophysicist | Data science enthusiast | Web dev and design newbie

## WORK EXPERIENCE

Young scientist with 5+ experience in research, code development and teaching. Skilled in data analysis, classification, and modeling with frequentist and Bayesian methods. Versed in Python for code development and data science packages. Passionate about teaching and advising, with a particular interest in boosting the representation of underrepresented groups in STEM.

## CONTACT

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🔗 <https://gecheline.github.io/astropond>

## EDUCATION

### Ph.D (2017)

Institution: University of Ljubljana  
Area of study: astrophysics

### Master's Degree (2014)

Institution: University of Ljubljana  
Area of study: physics & astrophysics

### Bachelor's Degree (2011)

Institution: University of Ljubljana  
Area of study: physics

### Villanova University - Postdoctoral fellow (Aug 2020 - now)

- Boosted modeling efficiency so that thousands of light curves can be analyzed in the current time it takes to model one system (~one-several weeks) using automated analysis with frequentist and Bayesian inference;
- Introduced fast and efficient analytical model refinement of orbital periods for the TESS Eclipsing Binary database;
- Advised students on projects for modeling and classification using machine learning methods.

### Villanova University - Postdoctoral Teaching Fellow (2017 - 2020)

- Demonstrated that the current approach to modeling contact binaries is inaccurate and introduced a Python code for computing radiative transfer in contact binary atmospheres, published at <https://github.com/gecheline/stargrit.git>;
- Introduced an unsupervised learning classification method and determined the *Gaia* satellite's eclipsing binary detection rate;
- taught two courses per semester (~15-30 students each).

### University of Ljubljana - Teaching Assistant (2015-2017)

- led the recitations section of courses for Astronomy majors, including advising on computational and observing projects (~10-20 students per semester).

### Additional relevant experience and contributions

- designed, developed and maintains <http://flipofficial.com> - official website for FLiP (artist) with built-in web radio component (ReactJS, HTML, CSS, Adobe Illustrator) - 2020
- designed and maintains <https://gecheline.github.io/astropond> - my personal website, including research, teaching information and creative design portfolio. (Gatsby.js, ReactJS, HTML, CSS/SCSS, Adobe Illustrator, Procreate) - 2021
- leads yearly Diversity & Inclusion departmental project to highlight female and black astronomers and astrophysicists in honor of Black History and Women History Months
- member of several international teams: PHOEBE development team, Kepler EB Working Group, TESS EB Working Group, Gaia CU7, ISSI International Team 377

## SKILLS

python  
programming ☐  
data science ☐

statistical inference  
frequentist ☐  
Bayesian ☐

HTML/CSS ☐  
Reactjs ☐  
SQL ☐

ML/AI ☐  
Javascript ☐  
C# ☐ Scala ☐

Procreate ☐  
InDesign ☐

Photoshop ☐  
AfterEffects ☐

Illustrator ☐  
XD ☐

Communication  
Problem solving  
Team work

Flexible  
Creative  
Self-driven