

Pal Szabo

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EXPERIENCE

MTA Research Centre for Astronomy and Earth Sciences, Budapest — Software Developer

June 2018 - September 2019

Astronomical data analysis, (mainly) in Python for Kepler & TESS space telescopes.

Kavli Institute for Cosmology, Cambridge — Intern

June 2017 - September 2017
Worked mainly in MATLAB, investigating some black hole properties based on ground-based observations.

ONLINE PRESENCE

Stackoverflow profile:

stackoverflow.com/users/8565438/zabop

GitHub repo I am most proud to have an accepted PR is NASA's:

github.com/KeplerGO/lightkurve

FINANCE-RELATED CODING EXPERIENCE

Project Stork: Exploiting triangular arbitrage opportunities on cryptocurrency markets. Script:
bit.ly/cryptoarbitrages

EDUCATION

University of Cambridge — Physics & Math student

October 2016 - March 2018 &
October 2019 - present

Strong mathematical background.

Most important Math topics:

Linear Algebra, ODEs, PDEs, Calculus, Fourier Methods, Complex Analysis, Group & Representation Theory

Favourite Physics topics:

Quantum Physics (mainly operator approach - strong connection to Linear Algebra)

Electromagnetism (applied vector calculus)

SKILLS

Python: 1+ year experience, several publications

MATLAB: university course & an internship

C++: university course & self-taught, ideal gas and n-body simulations:
github.com/zabop/idealgas
github.com/zabop/nbodysims

Additional skills include:

Linux systems, Shell, Version control, IDL.

PERSONAL STUFF

I can ride a unicycle & happy to play hockey on it
Built a catamaran & it worked
Hitchhiked 5k+ kms & survived

"Not the brightest student I have ever had but a candidate for the most eccentric one."

DATA-DRIVEN PUBLICATIONS

The Astrophysical Journal Supplement Series:

arxiv.org/abs/1909.00446

Role: most of data processing & figures

3 more are in the advanced stages of prep.

Posters:

zabop.github.io/autoeap.pdf

Role: algorithm & pipeline development
(main author)

zabop.github.io/BlazhkoPoster.pdf

Role: calculation of amplitude - phase modulation of target stars

The above two were presented at TASC5/KASC12 Conference, MIT

tsc.mit.edu/posters/Molnar_Laszlo.pdf

Role: merge & visualization of TESS photometry and Gaia astrometry data (top figure)

Presented at TESS Science Conference I, MIT

Also contributed to:
zabop.github.io/ogle.pdf
(Presented at the RR Lyrae and Cepheid Conference 2019, NM, USA)

CAN PROVIDE REFERENCE FROM

my **Director of Studies**,
Magdalene College, Cambridge

or from the **Director of MTA Research Centre for Astronomy and Earth Sciences**, Budapest