

# kasra koushan

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## personal

 /kasrakoushan

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## skills

### programming

Python, Java, MATLAB

### markup

HTML, CSS, LaTeX

### tools

Git, SVN, SSH,  
Shell, Vim

## activities

Robotics  
UNITY Dance  
Philosophy Congress  
**MOOCs in** *exoplanets,*  
*behavioural biology,*  
*bioinformatics,*  
*game theory*

## experience

May–Aug '15 **Theoretical Astrophysics, McGill University**

Montreal, QC

*Research Assistant*

Produced models of exoplanet interiors to find relationships between central pressure, envelope entropy, and other parameters as constrained by mass and radius observations, supervised by Professor Andrew Cumming.

Technical details:

- Developed models in Python using SciPy, NumPy, Matplotlib
  - Adaptive-step numerical integration, root-finding, differential evolution, multi-dimensional spline interpolation, Monte Carlo schemes
- Presenting at Canadian Undergraduate Physics Conference (Oct '15)

Sept '15 – **Neuroscience, University of Toronto**

Toronto, ON

*Research Assistant*

Implementing and reviewing various sequence learning algorithms to be used in studies of rat neuronal responses to sequential visual stimuli, under the supervision of Professor Chris Honey.

## projects

Sept '15

**glas4.co**

MHacks 6

Web app for organization of political candidates' speeches and interviews into clips organized by topic.

Aug '15 –

**thestrاند.ca**

The Victoria College Strand

Developer of Wordpress website for the official student newspaper of Victoria College at the University of Toronto.

## education

2014–2018 **Bachelor of Science**

University of Toronto

*Mathematics & Computer Science, CGPA 4.00/4.00*

**Coursework:** Software Design, Calculus, Linear Algebra, Analysis on Manifolds, Statistics, Mechanics & Electromagnetism

## awards

May 2015

**Summer Undergraduate Research Award**

NSERC

Grant awarded on the basis of academic achievement and research potential by the National Science and Engineering Research Council of Canada.

Sept 2015

**Best Use of Parse API (2nd Place)**

MHacks 6

Awarded for use of Parse API in Glas4 project at MHacks. See [glas4.co](http://glas4.co) (also featured on the indico gallery).

Sept 2015

**University of Toronto Scholar**

University of Toronto

Awarded to top 100 students in class at the Faculty of Arts & Sciences.