Saghar **Asadi**

Data scientist

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About

A creative geek, interested in astronomy, pedagogics, science outreach, dancing, and board games. A full–time learner, in constant search for new challenges to solve!

Skills

- Python(5), LaTeX(5), MATLAB(4), nodejs(4), SQL(3), R(2), Cython(2), C(1), FORTRAN(1)
- SKlearn(5), NumPy(5), Pandas(4), Matplotlib(4), Bokeh(3), OpenCV(3), TensorFlow(3), Keras(3), D3(3)
- Farsi(5), English(4), Swedish(3), French(1)

Results

- Built experimental computer vision based components for predictive maintenance data collection and analysis onboard ships (Innovation Garage AS)
- Built an app to monitor the company internal data flow, making customer data reliably consistent across departments and software systems (SpeedLedger)
- Developed and visualized performance metrics for multiple departments (SpeedLedger)
- Presented the results of my research to both professional and public audience (2012–2016)
- Organized numerous science outreach programs from the age of 15 (2001–2016)
- Organized the first graduate–level machine learning course across physics and astronomy departments at Stockhom University (2015)
- Wrote simulation software for the first Swedish SETI project (Stockholm University 2015)
- Developed data analysis methods to optimize the sensitivity and resolution of radio interferometers with the end goal of constraining the mass of dark matter particles (MSc./PhD)
- Made simulations to estimate the ability of near–future radio interferometers to constrain the standard model of dark matter (MSc./PhD)
- Worked in a team introducing extra–curricular science projects in a few high schools in Tehran for the first time, encouraging critical thinking about science as well as the educational environment. Many of those students have since gone on to pursue careers in science (2005–2009)
- Served in organizing/scientific committees of several physics/astrophysics conferences for high–school students (2005–2009)

Research

- A machine learning approach to time delay estimation – case of gravitationally lensed quasars
- Dark matter substructure in the main lens of B1152+199?
- Extragalactic SETI: The Tully-Fisher relation as a probe of Dysonian astroengineering in disk galaxies
- Primordial star clusters at extreme magnification
- Hunting for dark halo substructure using submilliarcsecond–scale observations of macrolensed radio jets
- Gravitational lensing and radio interferometry as a probe of the small–scale structure of dark matter
- Gravitational millilensing as a probe of dark halo substructure

Positions

Innovation Garage AS — *Tromsø, Norway*
Innovator — *Aug. 2017 - Present*

SpeedLedger — *Göteborg, Sweden*
Data ninja — *Oct. 2016 - Jun. 2017*

Stockholm University - Department of Astronomy — *Stockholm, Sweden*
PhD in Astronomy — *Aug. 2012 - Sep. 2016*

Stockholm University - Department of Astronomy — *Stockholm, Sweden*
MSc. in Astronomy — *Sep. 2010 - Jun. 2012*

Shahid Beheshti University - Department of Physics — *Tehran, Iran*
BSc. in Physics — *Sep. 2005 - Jun. 2009*