Xue Li, Ph.D.

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Summary

Data Scientist with a Ph.D. in Astrophysics and Cosmology, specializing in data analysis, machine learning, and AI. Proficient in data modeling, pattern recognition, and a strong track record of leading and contributing to scientific research projects.

Professional Experience

2022-up to date: Self-employed, data scientist
- Leveraged data analysis, machine learning, and statistical methods to provide insights into a variety of projects.
- Independently managed projects, ensuring timely and high-quality deliverables.

2016-2022: **Research Associate, physics department, Tsinghua University, China**
- Conducted cutting-edge research in astrophysics, contributing to multiple projects and publications.
- Collaborated with international teams, applying advanced mathematical and statistical tools for time series data analysis.
- Principal Investigator for National Post-doc Fundings and participated in National Fundings.

2014-2016: Visiting researcher, Niels Bohr Institute, University of Copenhagen, Denmark
- Collaborated with a global network of astrophysicists, using computational skills to analyze complex datasets.

Education

2010-2014: PhD in Astrophysics and Cosmology, Niels Bohr Institute, University of Copenhagen, Denmark
2006-2009: MSc in Physics, Dalian University of Technology, China
2002-2006: BSc in Physics, Dalian University of Technology, China

Skills

- Python, IDL, Matlab, R, SQL, TensorFlow, PyTorch, Deep Learning, AI, MS Power, Azure, Data Analysis, Predictive Modeling

Certifications

- TensorFlow Developer Certificate
- Microsoft Certified: Azure Data Scientist Associate
- Microsoft Certified: Azure AI Engineer Associate
- Microsoft Certified: Power Platform Solution Architect Expert
- Microsoft Certified: Power BI Analyst Associate

- Microsoft Certified: Power Platform Functional Consultant Associate

Selected leading and contributed projects

1. Supernova Classification with AI
  - Supervised a student in a study of supernovae classification using artificial intelligence.
  - Collaborated on data collection, ML model building, and data analysis using R, TensorFlow, and Python.

2. Netizen Behavior Analysis
  - Led a project on netizen behavior analysis through web scraping and social media analysis.
  - Applied web scraping techniques to collect real-time social media data and utilized machine learning techniques such as TensorFlow for netizen behavior modeling.

3. AT2018cow: Time Series Analysis
  - Initiated and led a scientific project on AT2018cow, designing the scientific approach.
  - Applied mathematical and statistical tools to analyze time series data, presenting findings at the American Astronomical Meeting in 2022.

4. SN 2018oh: Supernova Origin
  - Contributed to a scientific project on SN 2018oh, utilizing Matlab and Python for data analysis.
  - Identified the origin of supernova explosions, highlighted by NASA.

5. GRB-SNe and Cosmology
  - Led a scientific project on gamma-ray burst supernovae (GRB-SNe) and cosmology, identifying intrinsic trends and patterns in GRB-SNe light curves for measuring cosmological parameters.
  - The project was highlighted by Sky & Telescope Magazine.

6. Numerous Scientific Projects
  - Led and contributed to over 10 projects and 20 scientific papers focused on data analysis and data science in the field of scientific research.

Awards and Scholarships

2020: Excellent Tutor' awarded by Beijing Association for Science and Technology.
2006-2009: National scholarship recipient for master's studies.
2006: Awarded a postgraduate placement without an entrance test.
2002: Named 'Best Debater' and represented the college to win third place in the university-level debate competition.
2001: Third prize in the Chinese Physics Olympiad.