李 维天

📞 132-6262-0332   @ liweitianux@live.com   ⭘ github.com/liweitianux
🏛 上海交通大学   🎓 物理学 • 博士   🏭 1991-09-26   🏠 湖南 • 邵阳

　　物理学专业(射电天文方向)直博研究生, 有扎实的物理、数学与统计学基础, 擅长数据建模与分析, 热衷计算机和网络技术, 有 10 年的 Linux 和 BSD 使用经验, 熟练掌握 Shell、Python 和 C 语言编程。积极实践自由开源精神, 在 GitHub 上分享多个项目, 是 DragonFly BSD 操作系统的开发者, 并积极参与其他多个开源项目。

🔧 技能和语言

操作系统	🐧 Linux (10 年); 🦋 DragonFly BSD & FreeBSD (7 年)
编程	Python, C, Shell, R, Tcl/Tk
工具	SSH, Git, Make, Tmux, Vi, Ansible
数据分析	R, Pandas; Matplotlib, ggplot2; Keras, Scikit-learn
网站开发	Flask, JavaScript, jQuery, Bootstrap
🈂 **语言**	英语 — 读写(优良), 听说(日常交流)

🎓 教育背景

现在	**上海交通大学** • 物理与天文学院
2013.09	物理学 • 博士(直博研究生, 在读, 预计 2019 年中期毕业)
2013.06	**上海交通大学** • 物理与天文系
2009.09	应用物理学 • 学士

⚙ 计算机技能

> DragonFly BSD 操作系统开发者:200+ 代码提交;内核以及系统工具;在邮件列表和 IRC 频道交流和回答问题
> 使用 Ansible 管理 VPS, 部署个人域名邮箱、权威 DNS、网站、Git、IRC 等服务
> 搭建并管理课题组的工作站、计算集群(4 节点)和网络设备
> 参与配置和测试上海天文台的 SKA 高性能计算集群原型机(1 管理节点 + 1 存储节点 + 4 计算节点)
> 设计并开发了"2014 第一届中国–新西兰联合 SKA 暑期学校"的整个网站(Django, Bootstrap, jQuery)

</> 个人项目

> atoolbox: (Python, Shell) 多年来累积的各种工具, 帮助管理系统、执行常用任务、分析天文数据等
> dfly-update: (Shell) DragonFly BSD 系统更新程序
> openrcs: (C) 改进 OpenBSD RCS, 使其与 GNU RCS 足够兼容
> fg21sim: (Python) 模拟低频射电天空图像
> cdae-eor: (Python, Keras) 使用卷积去噪自动编码器(CDAE)分离宇宙再电离(EoR)信号
> chandra-acis-analysis: (Python, Shell, Tcl) X 射线天文观测数据的半自动化分析程序
> resume: (LaTeX) 此简历的模板和源文件

科研成果

> 开发低频射电天空图像模拟软件:FG21sim
> 开发程序实现 X 射线天文观测数据的半自动化分析:chandra-acis-analysis
> 利用卷积去噪自动编码器(CDAE)在频率维度分离微弱的宇宙再电离(EoR)信号
> 利用卷积神经网络(CNN)对 FIRST 巡天的射电星系图像根据形态特征进行分类
> 显著改进星系团射电晕的建模, 并考虑低频干涉阵列的复杂仪器效应
> 改进 X 射线光谱拟合的背景成分建模, 获到更准确可靠的拟合结果
> 发表 2 篇第一作者以及 8 篇合作者 SCI 论文

💼 实习经历

2018.08 2018.04	数据工程师 @ 上海领脉网络科技（初创公司）
	❯ 从 Amazon 网页搜索并挖取商品与广告信息（Python, Requests, BeautifulSoup）
	❯ 配置 Airflow 服务器和数据库等基础设施, 定期从 Amazon 获取产品销售与广告投放等数据
	❯ 开发网站（Flask, jQuery）, 帮助客户优化 Amazon 广告投放
2013.09 2013.07	网站开发 @ 97 随访（初创公司）
	❯ 后端开发（Django）, 完成用户注册、数据存储和搜索等功能
	❯ 前端开发（jQuery, AJAX）, 对患者各项指标随时间的变化进行可视化

Weitian LI

📞 132-6262-0332   @ liweitianux@live.com   ⌨ github.com/liweitianux
🎓 Ph.D. in Physics   🏛 Shanghai Jiao Tong University (SJTU)   🎓 1991 September   ⌂ Hunan

Highly-motivated Ph.D. in Physics (radio astronomy) with good foundations of math and statistics. Proficient in data modeling and analysis, and enthusiastic about computer and network technologies. With 10 years experience in Linux and BSD, skilled in Shell, Python, and C programming. Passionate about open source and share multiple projects on my GitHub. Meanwhile a DragonFly BSD operating system developer and a contributor to several other open source projects.

🔧 Competences & Languages

Operating Systems	🐧 Linux (10 years), 😈 DragonFly BSD & FreeBSD (7 years)
Programming	Python, C, Shell, R, Tcl/Tk
Tools	SSH, Git, Make, Tmux, Vi, Ansible
Data Analysis	R, Pandas; Matplotlib, ggplot2; Keras, Scikit-learn
Web Development	Flask, JavaScript, jQuery, Bootstrap
🔤 **Languages**	**English** — reading & writing (good); listening & speaking (conversant)

🎓 Education

present	School of Physics and Astronomy, **Shanghai Jiao Tong University**
September 2013	Ph.D. (candidate; to graduate in the middle of 2019) in Physics
June 2013	Department of Physics and Astronomy, **Shanghai Jiao Tong University**
September 2009	Bachelor's Degree in Applied Physics

⚙ Computer Skills

- DragonFly BSD operating system developer: 200+ code commits; kernel and system utilities; participate in discussions and anwser questions in mailing lists and the IRC channel.
- Use Ansible to manage a VPS running DragonFly BSD that serves personal email, authoritative DNS, website, Git, IRC, etc.
- Built and administrate the workstations, a 4-node computer cluster, and network facilities for the team.
- Participated in building and testing the SKA high-performance cluster prototype (1 login node + 1 data node + 4 computing nodes) in Shanghai Astronomical Observatory.
- Designed and developed the whole website (Django, Bootstrap, jQuery) for "The 1st China–New Zealand Joint SKA Summer School" in 2014.

</> Personal Projects

- `atoolbox`: (Python, Shell) Various tools collected over the years, to help manage systems, do daily tasks, analyze data, etc.
- `dfly-update`: (Shell) A simple tool to update a DragonFly BSD system.
- `openrcs`: (C) Enhance OpenBSD RCS, to make it compatible with GNU RCS.
- `fg21sim`: (Python) Simulate the low-frequency radio sky maps.
- `cdae-eor`: (Python, Keras) Use a Convolutional Denoising Autoencoder (CDAE) to separate the faint EoR signal.
- `chandra-acis-analysis`: (Python, Shell, Tcl) Semi-automate utilities for analyzing X-ray astronomical data.
- `resume`: (LaTeX) The template and source files of *this* resume.

Research Achievements

- Developed the low-frequency radio sky image simulation software: `FG21sim`.

- ❯ Developed a suite of utilities to semi-automate the X-ray astronomical data analysis: `chandra-acis-analysis`.
- ❯ Separated the faint cosmological EoR signal along the frequency dimension using a Convolutional Denoising Autoencoder (CDAE).
- ❯ Classified the radio galaxies in the FIRST survey according to morphologies using a Convolutional Neutral Network (CNN).
- ❯ Significantly improved the modeling of radio halos, and integrated the instrumental effects of radio interferometers into the simulation pipeline.
- ❯ Improved the background modeling in X-ray spectral fitting achieved more accurate and robust fitting results.
- ❯ Published 2 first-author and 8 co-authored SCI papers.

💼 Internships

August 2018 April 2018	Data Engineer @ Leadvisor Technology Inc. (startup company) ❯ Search and scrape product and advertising data from Amazon web (Python, Requests, BeautifulSoup). ❯ Deployed the Airflow server and database to periodically retrieve product sales and advertising data from Amazon. ❯ Developed the website (Flask, jQuery) to help customers to optimize their advertising campaigns on Amazon.
September 2013 July 2013	Web Developer @ 97 Suifang (startup company) ❯ Developed the back-end (Django) to support user registration, data storage and search. ❯ Developed the front-end (jQuery, AJAX) to visualize the temporal variations of a patient's examination indicators.