李 维天

並 上海交通大学 ★ 物理学・博士

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

⚠ Linux (10年), **U** DragonFly BSD & FreeBSD (7年) 操作系统

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

A 文 语言 英语 - 读写(优良), 听说(日常交流)

☎ 教育背景

2019.09 上海交通大学 • 物理与天文学院

物理学•博士 2013.09

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: (MT_EX) 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 数据工程师@上海领脉网络科技(初创公司)

- ➤ 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 | 网站开发 @ 97 随访(初创公司)

2013.07 > 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

Kemiao Huang

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🏠 Shenzhen, Guangdong, China 📢 github.com/Kemo-Huang

Within three years experience in Computer Science.

Education

Department of Computer Science and Engineering, Southern University of Science Present

Wovember 1998

and Technology (SUSTech)

September 2016 | Bachelor in Computer Science

Research of Interest

> Machine Learning

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- > 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.
- > autoware-exp: (Robotic Operating System (ROS)) 2D / 3D object detections in Autoware for autonomous driving.
- ➤ resume: (ᡌTFX) The template and source files of *this* resume.

Experience

- > 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
- > Published 2 first-author and 8 co-authored SCI papers.

a Internships

September 2019 July 2019 Software Developer @ Shenzhen Haylion Technologies Co., Ltd.

- > Developed
- ➤ 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.

💠 Skills

Operating Systems Linux, ROS

Computer Vision OpenCV, Pytorch, PCL

Data Analysis Scikit-learn, Pandas, MATLAB

Development Android, SpringBoot, Unity, Flask, WeChat mini-app