Jingjing Lin

jl32@princeton.edu • http://www.aspenlin.com • https://www.github.com/aspenlin

SUMMARY OF QUALIFICATIONS

- Proficient in Python, UNIX/LINUX and SQL. Familiar with Java, Git, MATLAB, and C.
- Hands on experience in building dev/production ETL data pipelines with Python packages such as pandas, NumPy, scikit-learn, matplotlib, seaborn, and Jupyter, including data retrieval, data transformation/aggregation, data validation and data visualization.
- Experience in full stack development through maintaining a personal website on the Google Cloud Platform utilizing web development technologies such as Django, NGINX, SQLite, JavaScript, React, HTML and CSS.
- Demonstrated project management, communication, critical thinking, and problem-solving skills.

EDUCATION

Princeton University, Princeton, NJ — Sep 2014 – March 2020 (Expected)
- Ph.D. in Physics

University of Science and Technology of China (USTC), Hefei, China — Sep 2010 – June 2014
- B.S. in Applied Physics

WORK EXPERIENCE

Siuvo Inc., Princeton, NJ — June 2019 – July 2019
Data Scientist, Summer Internship
- Worked on Optical Character Recognition (OCR) for application in the medical area with open source engine Tesseract on AWS. Wrote Python programs to extract values from medical lab test images. To be deployed in production to automate the process of lab test report digitization.
- Built data pipelines to automate the process of extracting, transforming, and loading data for further analysis.
- Performed data quality check. Applied image dewarping and adaptive thresholding with image processing packages such as ImageMagick and OpenCV-Python to improve image quality and Tesseract prediction accuracy.
- Retrained the LSTM Deep Learning neural networks implemented in Tesseract to improve precision and recall.
- Setup Swagger REST API Interface with Flask and Flask-RESTPlus.

Department of Physics, Princeton University — Jan 2015 – Present
Research Assistant
- Specialized in experimental condensed matter physics. Worked on topological materials. Carried out close to 10 projects in collaboration with multiple research groups across departments.
- Performed data analysis with Python and MATLAB using methods such as interpolation, non-linear curve fitting and Fast Fourier Transform. Wrote Python utility tools using the pandas, NumPy, SciPy, glob, and matplotlib packages to efficiently process and manage experimental data.
- Wrote automation tools that utilized Python packages and libraries such as QCoDeS and matplotlib to remotely control lab equipment, improving project efficiency by more than 50%.

MAJOR ACHIEVEMENT

- Anomalous Hall Effect in ZrTe5, 2018, *Nature Physics*
- Anomalous Nernst Effect in the Dirac Semimetal Cd_3As_2, 2017, *Phys. Rev. Lett.*
- A pressure-induced topological phase with large Berry curvature in $Pb_{1-x}Sn_xTe$, 2017, *Science Advances*
- Experimental Tests of the Chiral Anomaly Magnetoresistance in the Dirac-Weyl Semimetals Na_3Bi and GdPtBi, 2018, *Phys. Rev. X*
- Phase diagram and physical properties of $NaFe_{1-x}Cu_xAs$ single crystals, 2013, *Phys. Rev. B*
- Sn-doped $Bi_{1.1}Sb_{0.9}Te_2S$ bulk crystal topological insulator with excellent properties, 2016, *Nature Communication*
- Outstanding Student Scholarship in all three years in college