Rin Huang

Mobile: +61 04 5027 0703
Email: huang@rin.contact
LinkedIn: linkedin.com/in/sunchuangyuhuang
GitHub github.com/rNLKJA

Address: 37-43 Breese Street, Brunswick, VIC 3056
Website: rin.contact
Victorian Driver's Licence

Career Overview

A Data Scientist skilled at uncovering hidden insights. Passionate, curious, and pragmatic. I translate complex data into compelling narratives, aiming at crafting impactful, adaptable, actionable data-driven solutions. Excelling in both collaborative and independent work settings.

Skills & Key Competencies

- Proficient data wizard skilled in transforming complex data into strategic insights with advanced data science techniques.
- Experienced tech architect in Big Data, Cloud Computing, and databases for efficient data management.
- Versatile technologist proficient in Python, R, SQL, and modern web technologies with agile project management skills.
- Compelling storyteller excelling in translating data insights into engaging narratives that resonate with audiences.

Work History

Walter and Eliza Hall Institute of Medical Research | WEHI — Data Software Engineer — Feb 2024 - Current

WEHI, previously known as the Walter and Eliza Hall Institute of Medical Research, is Australia's oldest medical research institute.

- **Automation:** Automated the conversion and analysis of flow cytometry data, significantly enhancing research efficiency and innovation through cloud computing and HPC (High-Performance Computing).
- **Data integration and analysis:** Participated in the Genomics Metadata Multiplexing project, leveraging **Shiny/R** for advanced data integration and analysis, setting a benchmark in genomics research.
- **Improved Research Credibility:** Developed a test infrastructure to enhance the reproducibility and reliability of research outcomes, showcasing strong research skills and a commitment to scientific quality assurance.

HEX Innovating Education — Digital Product Builder — Nov 2023 - Current

HEX Innovation Programs are the simplest first step to launching your next move. Creating a start-up, learning new tech jargon, or levelling up your impact leadership.

- **Development and Optimisation**: Spearheaded the development and optimisation of digital content libraries. Significantly improved online education experiences through data-driven insights and content management.
- **Integration and Research**: Seamlessly integrated e-commerce platforms with Learning Management Systems (LMS), leveraging research on interactive content solutions to enhance user experience and contribute to substantial revenue growth.
- **Team Management**: Effectively communicated with senior and executive teams to align project objectives and maximise deliverable impact. Employed advanced communication skills to ensure clarity, precision, and efficiency in meeting the project's goals and driving decision-making processes.

Education

♦ Master of Data Science	The University of Melbourne	2023
♦ Bachelor of Science (Data Science)	The University of Melbourne	2019

Certificates

♦ Atlassian Agile Project Management Professional Certificate	Atlassian	2024
♦ Advanced SQL for Data Scientists	LinkedIn	2024
♦ Google Data Analytics Specialization	Google	2022
♦ Google IT Automation with Python Specialization	Google	2022

Data Projects

WEHI Genomics Metadata Multiplexing — Data Software Engineer — Feb 2024 - Current

https://github.com/WEHI-ResearchComputing/Genomics-Metadata-Multiplexing/wiki

WEHI, previously known as the Walter and Eliza Hall Institute of Medical Research, and as the Walter and Eliza Hall Institute, is Australia's oldest medical research institute.

Supervised by Rowland Mosbergan, the Genomics Metadata Multiplexing project at WEHI automates the conversion and analysis of flow cytometry data. Hosted on **WEHI Milton HPC OnDemand Service**, the **Shiny/R web application** simplifies converting raw *Cytoflowmetry* results into Excel for data analysis, aiming to rival FlowJo while offering enhanced data integration features. The project sets the foundation for future development, including voice control integration, to further **streamline and enhance the analysis process**, empowering researchers at WEHI to extract valuable insights from genomics metadata with efficiency and innovation.

CSIRO — Data Industrial Consultant — Feb 2023 – Nov 2024

I collaborated with Dr. Vassili Kitsios at CSIRO (Commonwealth Scientific and Industrial Research Organisation) within the Industry, Science, and Resources division on the project titled "Future Climate Risk Amplification of Food Security-Induced Conflict Machine Learning Estimation."

Our project focuses on **developing a time series machine learning model** to predict the impact of ENSO on food security dynamics. By accurately forecasting food prices with 90% accuracy using ARIMA models and analysing the correlation between ENSO events and cereal returns through Granger causality, we advance food security research. Our data engineering skills have been pivotal, particularly in **using the log-return for feature engineering**, which enhanced a customizable ARIMA model, boosting prediction accuracy by 10%. This approach allowed us to **leverage a small dataset to drive meaningful results**. This project addresses future climate risks on food security-induced conflicts, offering insights for proactive responses in data-driven decision-making roles.

The University of Melbourne — Full-Stack Data Developer — Feb 2023 – Nov 2024

https://github.com/rNLKJA/Australia-Social-Media-Analytics-on-the-Cloud

The University of Melbourne is a public research university located in Melbourne, Australia. I contributed for a cloud computing subject titled "Australia Social Media Analytics on the Cloud."

This project leverages Twitter data exports from the Australian Data Observatory, alongside data harvested from Mastodon APIs and the Spatial Urban Data Observatory (SUDO), to enhance our understanding of life in Australia. This initiative **employs web scraping, supported by Docker, Kubernetes, and Ansible** for scalability, and utilizes **High-Performance Computing (HPC) with Slurm** for processing extensive Twitter datasets. Initial insights are generated using **CouchDB's MapReduce** function, while data visualization is achieved through **React.JS and Plotly.JS**, offering a comprehensive analysis of social media's impact when integrated with official SUDO data.

CSL — Data Industrial Consultant — Apr 2022 – Jun 2022

CSL was founded in 1916 as Commonwealth Serum Laboratories, an Australian government body focused on vaccine manufacture.

In this project, we **crafted a digital transition script** that enhanced runtime efficiency by at least 80% for the transformation of lab experiment results. By harnessing our technical know-how and a modern plotting library, we boosted the speed of identifying out-of-control medical research data by 20%. Furthermore, we **utilized unsupervised clustering algorithms such as T-SNE, DBSCAN, and UMAP** to discover hidden data patterns, supporting informed decision-making. Additionally, we **adhered to Agile methodologies** for project management and ensured our data practices **aligned with the FAIR (Findable, Accessible, Interoperable, Reusable) principles**, enhancing the project's efficiency and data utility.

Professional References

Contact Name	Position	Email
Dr Vassili Kitsios	Senior Research Scientists at CSIRO	Vassili.Kitsios@csiro.au
Marika B. Hille	Industry Consultant at University of Melbourne	m.hille@unimelb.edu.au
Rowland Mosbergen	Strategic Leadership and Digital Transformation at WEHI	mosbergen.r@wehi.edu.au