# LINGDUO(LINDA) LUO

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## EDUCATION

**Master of Spatial Data Science**, University of Southern California — August 2021 - May 2023
Relevant Coursework: Machine Learning for DS, Foundations of Data Management

**Bachelor of Geographic Information Science**, Sun Yat-Sen University — August 2017 - June 2021

**Summer Session Visitor**, University of California, Berkeley — July 2019 - August 2019

## SKILLS

- **Programming Languages**: Python (Advanced), SQL (Advanced), R (Intermediate), JavaScript (Intermediate)
- **Data Analysis**: ETL, Data Analysis, Database Management, Data Visualization, Machine Learning
- **Tools and Technologies**: Tableau, Web Scraping (BeautifulSoup), APIs, HTML, Flask, Big Data (Hadoop), Cloud Services (AWS/DynamoDB), SPSS, Geospatial Analysis (GeoPandas, ArcGISPro, Google Earth Engine)

## EXPERIENCE

**Hidonix Inc.** — Nov 2023 - Now
GIS Expert — *Los Angeles, U.S.*

- Managed **geospatial data acquisition** and **quality control** for **client-oriented indoor navigation software** services; utilizing various technologies and software tools to enhance data integrity and support strategic decision-making.
- Produced comprehensive **reports** and **maps**, collaborated with an international team, and implemented data security measures, ensuring the confidentiality and accuracy of information.

**Department of RS and GIS, Guangzhou Institute of Geography** [Demo] — March 2020 - December 2020
Research Assistant — *Guangzhou, China*

- Optimized a **GIS data pipeline** for urban land use analysis using **Python**, **SQL**, and **JavaScript**, achieving a **10x increase** in computation speed and enhancing data-driven decision-making capabilities.
- Developed and streamlined **ETL** processes for weather data analysis using **Python** & **SQL**, focusing on data integrity, preprocessing, and visualization; maintained comprehensive documentation to facilitate future maintenance and upgrades.
- Utilized **JavaScript** and **Google Earth Engine** to develop advanced sub-pixel **land use classification models**, **enhancing precision** in urban land use pattern classification detailed accuracy by **13%**.

## PROJECTS

**National Parks & Areas Travel Planner Web Application** [Website] [GitHub] — February 2023 - May 2023

- Developed a **data-driven web application** for U.S. National Parks travel planning on PythonAnywhere, focusing on data integration and analytics to **enhance user efficiency by 20%**. Utilized **geospatial analysis** to provide insightful **location-based** recommendations.
- Conducted extensive **data collection** and **cleaning** using **Python**, employing **ETL** processes for **web scraping**; integrated **APIs** (OpenWeatherMap API & Google Maps API) for real-time weather and route data, enabling dynamic data analysis and application responsiveness.
- Designed and implemented a user-friendly website interface using **Flask**, **HTML**, and **Python**, focusing on **data visualization** and **interactive** features like route search and weather forecasts; emphasized intuitive data presentation for easy information access and analysis.

**Healthcare Accessibility Analysis using Agent-Based Modeling (ABM) and ArcGIS** [GitHub] — April 2023

- Performed in-depth spatial **data integration** using **ArcGIS Pro** & **Python**, combining healthcare, census, and socio-economic datasets for San Francisco, to lay a solid foundation for advanced data analysis and insights.
- Utilized **GIS** and **NetLogo** to create an **Agent-Based Model (ABM)** that simulates elderly patients' behaviors and healthcare interactions, providing strategic insights for data-driven healthcare planning and decision-making.
- Developed a **dynamic time-series accessibility map** with **ArcGIS** and **Python**, guiding strategic resource allocation and demonstrating expertise in spatial analysis to improve healthcare access for elderly communities and enhance accessibility.