

# HEITOR CHANG

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## PROFESSIONAL EXPERIENCE

### FREELANCE SOFTWARE ENGINEER, SÃO PAULO, SP

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*Senior Full-Stack Developer*

*Mar. 2023 – present*

- Created REST APIs in Python with FastAPI and PostgreSQL to fetch data for a given scenario and time frame, and deployed them to Google Cloud.
- Developed a static site generator in Python to mirror a local directory and add a practical navigation interface for the content.
- Formulated a domain-specific language for an application's front-end based on Scheme's functional programming concepts to manipulate DOM elements directly.

### MEDIAFLY, INC., CHICAGO, IL (REMOTE)

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*Senior Software Engineer, Data and Client Squad*

*Aug. 2022 – Feb. 2023*

- Extended a Python back-end service handling customer integration with Salesforce's API to allow the creation of new custom objects holding metadata.
- Improved the Python video call processing pipeline, filtering out unwanted blocks of silence.
- Corrected multiple occurrences of temporary files not being cleared and other data inconsistencies in the Python pipeline code.

### TEMPO OK TECNOLOGIA EM METEOROLOGIA LTD., SÃO PAULO, SP

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*Senior Full-Stack Developer*

*June 2020 – Aug. 2022*

- Built and administered the public-facing website with Django, including custom user management and authentication with a JWT extension.
- Architected a PostgreSQL database in Google Cloud Platform to store meteorological observation and forecast time series at client-supplied locations and government-operated stations.
- Built FastAPI endpoints to communicate with a PostgreSQL database using Google Cloud Functions and Cloud Run, leveraging Docker containers and Bitbucket's Continuous Deployment pipeline.
- Created a geospatial dashboard containing satellite imagery overlays computed from NASA's scientific data and weather stations' historical data, obtained by accessing their public APIs.
- Created a hydroelectric energy forecasting dashboard containing Google Maps and Apache ECharts widgets in Vue.js and the Vuetify Material Design front-end framework.

## PONTUAL EXPORT & IMPORT LTD., SÃO PAULO, SP

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*Full-Stack Developer*

*Jan. 2014 – June 2020*

- Used MA (Moving Average) indicators in a Django and Python project to predict the demand for 600 products and calculate appropriate amounts for restocking.
- Prepared sales forecasts and summarized business-critical statistics in a Django app.
- Created a REST API with the Slim micro framework in PHP to be consumed by a React app that rendered the company's website.
- Visualized historical sales with NumPy and Pandas, reporting totals and outliers for each product.
- Created a Single-Page App with AngularJS and Firebase to organize product reservations by clients and their assigned salesperson in real-time.

## EDUCATION

### NEW YORK UNIVERSITY, NEW YORK, NY

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*M.S. in Financial Mathematics, 2009*

### STANFORD UNIVERSITY, STANFORD, CA

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*M.S. in Materials Science and Engineering, 2007*

*B.S. in Mathematical and Computational Sciences, 2005*

## SKILLS

- Fluent in **English** and **Portuguese**.
- Intermediate knowledge of **Italian** and **French**.
- Elementary knowledge of **Mandarin**, **Japanese**, **Spanish**, and **Modern Greek**.
- Advanced knowledge of **Python**, **JavaScript**, and **HTML**.
- Intermediate knowledge of **Django**, **PostgreSQL**, **React**, **Vue**, **Scheme**, and **CSS**.
- Basic knowledge of **C** and **Java**.