

# William (Wila) Braga

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## WORK EXPERIENCE

### **Centuria, Inc.**

**Remote**

#### *Application Programmer II*

*Nov, 2023 - Present*

- Developer on several diverse front and back-end weather systems of the National Data Buoy Center (NDBC)
- Rewrote multiple MATLAB quality-control programs into Java and deployed to AWS server for cloud migration, saving hundreds in MATLAB licensing fees and maximizing code up-time

#### *Application Programmer I*

*Nov, 2022 - Nov, 2023*

- Independently developed and tested the data-ingest initiative with SOFAR Ocean - a partner organization that sails out drifting buoys, retrieving their real-time data stream using an AWS S3 bucket, formatting it into BUFR files using the ecCodes python library, and internally distributing with Bash over FTPS
- Reviewed the NDBC's website redesign, correcting dozens of PHP and JS bugs that would have caused crashes
- Wrote a technical document outlining developer best practices when sanitizing user input, compiled by interviewing senior developers and researching OWASP, and designed model code snippets in different languages

### **College of Computing, Georgia Tech**

**Atlanta, GA; Barcelona, ES**

#### *Teaching Assistant*

*Aug 2019 - Aug, 2022*

- TA over five semesters, teaching Natural Language Processing, Intro to Databases, and Discrete Mathematics
- Served my last semester as a study abroad teaching and program assistant in Barcelona, Spain after graduating
- Taught dozens of lectures and office hours, developing my technical communication skills

### **CHAI Lab, Georgia Tech Research Institute**

**Remote**

#### *Graduate Research Assistant*

*Aug, 2021 - Dec, 2021*

- Contracted by the Centers for Disease Control and Prevention to conduct NLP research for the Covid-19 response
- Compiled spreadsheets of companies' return-to-work policies with an article webscraper and spaCy's part-of-speech tagging and entity recognition tools
- Flagged patients with Covid-like symptoms in doctors' notes by writing advanced Regex matching statements

### **Assurant, Inc**

**Remote**

#### *Data Science Intern*

*May, 2021 - Aug, 2021*

- Documented IBM Fairness 360's efficacy in reducing model biases, motivating a future bias-reduction project
- Co-lead a research initiative to reduce customer service-level agreement times through novel machine-learning-model caching techniques
- Tested caching methods on real data, spanning hundreds of thousands of entries in distributed databases, on Databricks with SkLearn PCA, encoding, and feature importance functions and PySpark random forests
- Presented methodology and Matplotlib visualizations to multiple departments and VP stakeholders

## EDUCATION

### **Georgia Institute of Technology**

**Atlanta, GA**

#### *MS, Computer Science*

*Dec, 2021*

- GPA: 3.80
- Relevant Coursework: Computer Vision, Data Visualization, Simulation of Biology

#### *BS, Computer Science*

*Dec, 2020*

- Highest Honors
- GPA: 3.95
- Relevant Coursework: Natural Language Processing, Machine Learning, Automata

## **PROJECTS**

**Culinary Recipe Generation:** Compared quality of recipes generated with a GPT transformer versus custom Keras RNNs

**Video Stabilizer:** Smoothed video motion by translating a novel Linear Program equation into a Python application

**Gait Evolution:** Simulated and recorded the types of locomotion a body evolves through genetic algorithms

**Art Clustering:** K-Means clustered artwork from the Cleveland Museum of Art and visualized it using D3.js

## **SKILLS**

**Programming:** Python (8+ years), Java (8+ years), SQL (4 years), Javascript (3 years), C (3 years), R (new), Rust (new)

**Libraries:** PySpark, SkLearn, Pandas, Numpy, PyTorch, Tensorflow, NLTK, spaCy, matplotlib, OpenCV, D3.js, Node.js

**Technical:** Linux, Jupyter, Databricks, Tableau, Docker, LaTeX, MySQL, MongoDB, REST, Git, AWS S3, CUDA

**World Languages:** English (Native), Portuguese (Native - Spoken), Spanish (Advanced)

**Hobbies/Volunteer:** Reading (Sci-Fi, Classics), Watch Repair, Cooking and Homebrewing, Volunteer Webmaster