DIOGO FRIGGO

Software Developer & Physics Engineer

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EXPERIENCE

Software Developer & Wind Energy Engineer

Det Norske Veritas (DNV)

📅 May 2018 – Ongoing   📍 Porto Alegre, Brazil

- Rewritten a computational fluid dynamics (CFD) tool that produces wind resource grids. Original code in MATLAB rewritten from scratch in **Rust**. A week long calculation in the legacy code is now done in 30 minutes.
- Joined the WindFarmer team. [WindFarmer](#) is the company's flagship wind analysis software, world-renowed and widely used in the wind industry. Implemented several features over time while navigating a complex more-than-a-decade-old code base that mixes several technologies but mainly written in **C#** and **C++**.
- Developed a software development platform enabling software developers accross the company to plug-in their apps in an infrastructure- and deploy-ready web environment. UI looks and behaviour done in **Dash** while business code may be written in any language that compiles to **C**, so far there are apps in both **Python** and **Rust**.
- Mentored several engineers from different offices accross the world, through pair-programming sessions, lectures and production of learning content tailored to their needs.
- Developed a CFD-post-processing tool that ingests several GB of raw CFD data and produces isosurfaces at desired heights within minutes. This enabled the retirement of the time-consuming practice of storing and retrieving hundreds of TB worth of simulation data in external hard-drives and all the inneficiencies that came with it
- Developed a software solution for a client aimed at validating 12 of their windfarms' energy production which allowed them to build trust on their monitoring and benchmarking capabilities
- Developed a report automation solution to automatically fill out around 80% of a standard 200+ pages report which is the final deliverable sent to clients. Rate of reporting mistakes plunged. The time to write a report dropped from 4 days to 4 hours freeing engineers to work on non-automable tasks.
- Over the course of 4 years at DNV I have also developed a host of small self-contained applications that address inneficiencies in the wind industry: from simple timeseries calculations at the click of a button to complex physics simulations.

Software Developer

Hindustani Computers Limited (HCL)

📅 2010 – 2013   📍 São Leopoldo, Brazil

- Implemented agile methodologies of software development in a medium-sized team of 10 people delivering enterprise web applications based on **.NET**, **C#**, **JavaScript** and several other technologies.
- Built a fully-featured inventory management system for one of the largest infrastructure concession companies of Latin America using **.NET C#**, **Oracle** with **NHibernate** ORM mapping, **ASP .NET MVC** on the server-side and **ExtJS** on the client-side
- Built a mobile-based app for a pharmaceutical company allowing users to order medicine, track their delivery and find nearest drugstores
- Implemented a securities management web-based system for a healthcare provider based in Chicago, frontend made in **jQuery** and back-end in **C#**, **ASP.NET MVC**, **MSSQL**.

WHO AM I?

"An engineer truly passionate about code since of young age. When not coding for a living I'm usually coding for the sake of learning or pure pleasure in creating things with 0s and 1s."

STRENGTHS

10+ years
of experience in software development accross businesses and academia with several different technologies

Care for code
nobody wants to work on a rotten codebase. I strive to produce code that is as elegant, simple, obvious and extensible to the best of my abilities. And if so much as suspect that I could do better I go on a hunt to learn or build better ways

Eager to learn
and apply new technologies and new ways of thinking to improving processes, in particular currently in love with the **Rust** Language. Having dealt with 5 years of theoretical physics I can safely say that I excel at learning

Team worker
with several years of experience working with teams of developers while trying our best to follow agile methodologies

Commitment
Working smart to fulfill agreed obligations and smarter still in agreeing to them in the first place - planning is key. In 4 years working as an energy consultant this has come in handy time and again.

SKILLS

Loves to teach   Deep worker

Supportive & Team worker   Agile developer

Creative problem-solver

Committed to quality and delivery

- Worked as an interpreter and translator aiding Indian colleagues in communicating with local Brazilian clients

EDUCATION

B.S. in Physics Engineering
UFRGS

📅 Mar 2014 – July 2019

- Studied in-depth diverse areas of physics with a strong foundation on theory and later in the course more focused on applications in engineering.
- Topics ranged from nanotechnology, superconductivity and particle physics to relativity and quantum mechanics.
- Developed several simulations of physical models in a range of programming languages: **Haskell**, **Julia**, **Ruby** and **Mathematica**.
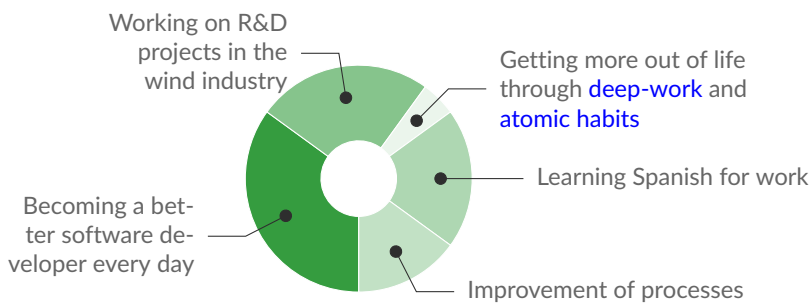- Built a snake game in hardware using assembly language.

Technical degree on IT
Alcides Maya

📅 2007 – 2010

- Learned fundamentals of software development (from machine code to higher-level languages)
- Awarded a post-graduation C# scholarship grant after winning best-project for a graphical scientific calculator written in C

MY CURRENT INTERESTS

Working on R&D projects in the wind industry

Getting more out of life through deep-work and atomic habits

Learning Spanish for work

Becoming a better software developer every day

Improvement of processes

Rust .NET C C++ C# Python R Erlang Elixir Bash Vanilla JavaScript NodeJS MIPS Assembly Ruby MATLAB F# Haskell Mathematica Julia MongoDB SQL/NoSQL Java CSS Manim

LANGUAGES

English
Spanish
German