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## SOFTWARE DEVELOPMENT SUMMARY

- Experienced and skilled junior web developer specializing in React.js web application development, proficient in both front-end and back-end technologies.
- My academic background in civil and environmental engineering equips me with a meticulous and data-driven approach to web development. I excel in automating processes and manipulating data, optimizing efficiency.
- Through active involvement in research projects and international collaborations, I have successfully applied my expertise in risk analysis, computer simulations, and remediation, bringing a fresh and innovative perspective to web development solutions.
- My effective communication skills make me a valuable asset in multidisciplinary team environments. My experience in teaching Excel workshops showcases my ability to effectively impart knowledge, embrace self-directed learning, and foster a collaborative mindset.

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## SKILLS

- **Languages: Proficient in Portuguese and English:**
  - Jun/22: EF SET - C2 Proficient (88/100); Jan/13: IELTS (Overall: 7.0)
- **Programming Languages: Python, TypeScript, JavaScript, SQL, GDScript**
  - Experienced in writing clean code on the frontend using JavaScript and TypeScript, following design patterns.
- **Frameworks: React.js, Next.js, Node.js, React Native**
  - **Primary framework for web development (frontend):** React.js and its ecosystem.
- **Web Development Tools: Git, GitHub, VSCode, Beekeeper Studio, Insomnia**
  - Frequent use of Git for code version control.

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## EMPLOYMENT & EXPERIENCE

*Freelancer: Game Developer**December 2020 - Present*

- Leading the development of the multiplayer infrastructure simulation, written in GDScript 4.0, following the received architectural design and discussing adjustments when necessary.
- Assisted in constructing an algorithm for 2D procedural generation of pixel-art cities, in a pseudo-random and infinite manner, combining Perlin noise concepts with contour calculations, resulting in maps with desired characteristics, embracing the loss of precision in information generation as a positive aspect.
- Contributed to the game design process by proposing new mechanics and means to enhance the immersive experience for novice players.

### Fresh Water Program in the State of Paraíba, Brazil

*Scholarship Developer**July 2022 - December 2022*

- Successfully revived the development project for the Fresh Water Program website, which had been dormant since 2020, leveraging the existing database schema of the original project.
- Implemented a single page application architecture to decouple the frontend and backend, enabling seamless communication between two distinct clients and a shared server.
- Developed two client applications: a web application utilizing the React.js framework and a mobile application using React Native. Designed and constructed both applications from the ground up, incorporating styling libraries for an enhanced user experience. The application server was built using Node.js, written in TypeScript.
- Spearheaded the conceptualization and implementation of a new feature, a chlorine dosing calculator, seamlessly integrated into both the web and mobile clients. This innovative addition greatly facilitated the routine tasks of the program team and desalination plant operators.
- Innovated by creating and automating various routines for the generation of memos and other program-related documents specific to the State of Paraíba, using Python. This automation significantly reduced processing time from days to mere minutes.

### SMART-Control consortium: partnership between Germany, France, Cyprus and Brazil

*Researcher**June 2018 - March 2020*

- As part of a dynamic and international multidisciplinary team, I actively contributed to risk analysis and remediation measures in various stages of managed aquifer recharge projects. This involved collaborative report writing, as evidenced by my involvement in Deliverable D2.1 available at <https://smart-control.inowas.com/deliverables/>.
- In addition, I took the lead in organizing field studies on controlled aquifer recharge in Recife (PE) and João Pessoa (PB). Through effective coordination, I facilitated the successful outcomes of master's research conducted by students from the Technical University of Berlin and the Federal University of Paraíba. This significant achievement led to the publication of our findings in a reputable international journal in May 2023 (Journal of Environmental Management: <https://doi.org/10.1016/j.jenvman.2023.118034>)

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## EMPLOYMENT & EXPERIENCE (Cont.)

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### IBI Engenharia Consultiva S/S

Civil Engineer

May 2019 - January 2020

- I updated the inventory of strategic reservoirs for the State of Paraíba by automatically modifying hundreds of Excel spreadsheets using scripts that I wrote in Visual Basic for Applications (VBA).
- Using VBA, I also created and executed water balance routines for each strategic dam in the state, with the aim of updating their respective regularization curves. These activities were carried out in the context of the 2020 Update of the State Water Resources Plan for Paraíba. (APERH-PB: <http://www.aesa.pb.gov.br/aesa-website/documentos/plano-estadual/atualizacao-perh/>)

Freelancer: Intermediate Excel Workshop Instructor

May 2017 - June 2019

- I delivered intermediate Excel courses ranging from 5 to 30 hours, catering to students of environmental engineering (PROAMBI, UFPB, in Sep/18; XVII ENEEAMB, and V Latin American Forum of Engineering and Sustainability in Jul/17), as well as the general public (Company TOT Coworking, in Jun/19 and May/17).

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## EDUCATIONAL BACKGROUND & QUALIFICATIONS

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### Rocketseat Explorer Program

Fullstack Web Developer

March 2022 - March 2023

- Completed a 200-hour training program covering the fundamentals of web development (HTML/CSS/JavaScript) and advanced topics such as RESTful API, frontend with React.js, and backend with Node.js.
- This training equipped me with the skills to independently pursue further knowledge, relying on documentation and online forums.
  - For example, in parallel with the program, I learned TypeScript, which I applied in the final challenge by developing a RESTful API with a clear separation of backend and frontend into two distinct applications: <https://github.com/victorsgb/food-explorer-frontend>
  - Additionally, I embarked on a parallel project using Next.js: <https://github.com/victorsgb/cellular-automata>

### Federal University of Paraíba

Master's Degree in Civil and Environmental Engineering, specialized in Water Resources April 2018 - September 2020

- Conducted scientific research involving fieldwork and computer simulations at the intersection of two significant areas of civil and environmental engineering: sustainable urban drainage and managed aquifer recharge.
- Under the guidance of my advisor, I led various field tests, taking responsibility for planning, execution, and result analysis. Some of these tests were conducted in the presence of undergraduate students, providing me with the opportunity to teach the concepts involved during the experiments.
- I developed and executed several Python programming routines for data processing and hydraulic simulation using outputs generated by open-source software. Subsequently, I utilized the language and its associated libraries for result analysis and visualization.
- The studies I conducted culminated in the installation of a pilot project for studying groundwater recharge and pumping at the University, leaving a legacy for future research in this field.

Civil Engineer (Bachelor's Degree)

August 2010 - December 2016

- Conducted scientific research integrating two distinct areas of civil engineering: urban drainage and structural design, with a combined effort to analyze the cost-effectiveness of reinforced concrete flood mitigation reservoirs. Successfully completed the course, and my efforts resulted in a publication in a national journal in June 2019 (RBRH: <https://doi.org/10.1590/2318-0331.231820170168>)
- Gained valuable experience by residing abroad for one year in Wales, United Kingdom, where I had the opportunity to enhance my English language skills and collaborate with both native (Welsh) and international individuals (Chinese, Indian, etc.) on academic projects and studies.

### English Course at CCAA

February 2003 - July 2008

- I acquired proficiency in speaking, writing, listening, and reading in English throughout this four-and-a-half-year educational program.

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## VOLUNTEER EXPERIENCE

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Volunteer Translator Portuguese to English

March 2023 - Present

- I am involved in translating promotional texts for the missionary and socio-educational agency PEPE International, which operates in various countries around the world. Additionally, I provide simultaneous translation (Portuguese to English or vice versa) during monthly team meetings.

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## INTERESTS

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Thriller/fiction books. I love teaching and learning, singing and playing the guitar. I enjoy videogames and board games.