

Highlights	<p>15 years of work experience and strong computer science background.</p> <p>Excellent understanding of modern frontend, including React.js, TypeScript, and GraphQL.</p> <p>Solid frontend testing skills, including static, unit, integration, and E2E tests.</p> <p>Experienced with backend development, algorithms, machine learning, and computer vision.</p> <p>Self-directed learner, clear communication/documentation skills, and English fluency.</p>
Education	<p>University of Campinas (Unicamp) – Campinas, Brazil 08/2011 – 02/2014 <i>Master of Computer Science</i></p> <ul style="list-style-type: none">• The second best university in Brazil according to THE World University Rankings.• Member of RECOD (Reasoning for Complex Data) lab.• Title: Low False Positive Learning with Support Vector Machines.• Advisor: Dr. Anderson Rocha. <p>Tiradentes University (Unit) – Aracaju, Brazil 08/2007 – 12/2011 <i>Bachelor of Computer Science</i></p> <ul style="list-style-type: none">• Highest MGP (GPA equivalent) in class.• Algorithms and Data Structures I TA.• Title: Automatic Relevance Ranking of Offers Based on their Features.• Advisor: M.Sc Fernando Henrique Bezerra Cardoso.
Selected Work Experience	<p>Venue – Toronto, Canada 03/2022 - 06/2023 <i>Senior Software Engineer</i></p> <p>Developed a proof of concept for an AI-based video editing tool within a two-week timeframe. When I joined the team, the product was unstable; however, through a complete rewrite of the RTC video module and significant improvements to the existing code, I successfully stabilized the video module, enabling the team to shift their focus towards implementing new features.</p> <p><i>Tech:</i> TypeScript, React.js, Node.js, Rails, Firebase, PostgreSQL, Metabase, Docker, Cypress.</p> <p>Brick Abode – Florianopolis, Brazil 06/2019 – 01/2022 <i>Senior Software Engineer, Tech Lead</i></p> <p>After joining the team, I led the front-end of a music asset secondary market platform, which quickly became the costumer's primary sales source, and introduced client-side routing. This success resulted in a notable increase in team performance, with the release frequency more than doubling. Recognizing my contributions, I was promoted to Tech Lead, where I excelled in development, leadership, project management, and hiring. For about 2 years, I effectively gathered requirements, utilized agile methodologies, actively participated in development, and mentored the team for continuous improvement.</p> <p><i>Tech:</i> React.js, Django, Jest, Cypress, Testing Library, PyTest, Docker, Shell Script, AWS.</p> <p>Devord – London, United Kingdom 07/2017 – 09/2021 <i>Freelance, Senior Software Engineer</i></p> <p>Designed, developed, and launched a custom CMS for a prints marketplace. It went live in 2018. The marketplace grew year after year, and was then purchased by an investor in 2021.</p> <p>It included: Client interaction to clarify requirements; Design, cost estimates, and milestones; Software implementation with status updates and reviews; Testing, launch, and maintenance.</p> <p>The software uses Shopify as a backend and follows a microservices architecture. The microservices communicate through message queues. There is a microservice for generating (through image processing) the product images that are later uploaded and displayed in the marketplace.</p> <p><i>Tech:</i> Shopify, React.js, React Native, Node, Firebase, PostgreSQL, Docker, CI, REST, Testing.</p> <p>MindSea – Halifax, Canada 05/2019 – 10/2019 <i>Senior Frontend Developer</i></p> <p>As the principal front-end developer, I completed and published a habit-forming nutrition web app within 6 months. It features a custom chat, payments, video calls, scheduling, and email.</p> <p><i>Tech:</i> React.js, Redux, Docker, Shell Script, REST APIs.</p>

HOOBX Robotics – Campinas, Brazil 03/2018 – 05/2019
Machine Learning and Computer Vision Engineer, Tech Lead

Led the implementation of software that controls a robotic wheelchair through facial expressions and applications for showcasing our computer vision products. Developed methods for detecting facial expressions, measuring a patient's pain level, and more.

Tech: TensorFlow, OpenVINO, AWS, Python, Scikit, Docker, React.js, Node, WebSockets, REST.

Samsung Research Institute Brazil (via Unicamp) – Campinas, Brazil 03/2014 – 03/2016
Machine Learning and Computer Vision Engineer

I optimized and ported a real-time computer vision pipeline to Android, achieving a speed gain of 63.5%. Also implemented machine learning algorithms and a method that detects sensitive audio with an accuracy of 89.5%. Our team got a US patent and 2nd place at the VSD generalization task of the MediaEval 2014 competition.

Tech: C++, Python, Android, Shell Script, OpenCV, LibSVM, FFmpeg, openSMILE, VLFeat.

Selected Projects

Algorithms Training 06/2016 – 04/2017

- Solved over 300 problems from Introduction to Algorithms, Third Edition (CLRS).
- Solved and coded in C++ over 80 coding problems from different sources.
- Theoretical solutions available online at <http://clrs.dmoraes.org>.
- Coded solutions available online at <https://github.com/danielmoraes/epi>.

Tech: C++, L^AT_EX.

Crowd Detection with BinBoost Descriptors 03/2014 – 06/2014

- Method to detect crowds on images – achieved an accuracy of over 94%.
- Developed on a team of two researchers.
- Paper available online at <https://dmoraes.org/projects>.
- Research conducted under supervision of Dr. Siome Goldenstein and Dra. Sandra Avila.

Tech: Python, Shell Script, OpenCV, LibSVM, BinBoost.

Low False Positive Learning with Support Vector Machines 12/2012 – 02/2014

- Novel 2-level learning method for low false positive classification.
- Methods effectiveness showed through comparisons to other solutions in 33 datasets.
- Published on the 38th vol of the Journal of Visual Communication and Image Representation (JVCI).
- Research conducted under supervision of Dr. Anderson Rocha and Dr. Jacques Wainer.

Tech: Python, LibSVM.

Feature-Based Product Ranking 08/2012 – 12/2012

- A product ranking algorithm based on SVMs that takes into account the cost-benefit ratio.
- Agreement of 64% according to a test conducted with 79 users.
- Research conducted under supervision of Dr. Anderson Rocha.

Tech: Python, LibSVM, R, JavaScript, HTML/CSS.

Spider for Google Shopping and Buscape 05/2012 – 08/2012

- An HTML spider that collects products data from Google Shopping and Buscape.
- Collected and refined data from 495,000 offers of laptops from Google Shopping during 7 months.

Tech: Python, LibSVM, JavaScript, SQL (MySQL), HTML/CSS.

Teaching Experience

Unraveling JavaScript 11/2010
Short Course

- JavaScript course presented to computer science students at Tiradentes University.

Technical Skills

Programming: TypeScript, JavaScript, Python, C++, Shell Script, SQL.

Frameworks/Tools: React.js, Next.js, Jest, Cypress, Node.js, Django, Git, L^AT_EX.

Databases: PostgreSQL, MySQL, Redis, RabbitMQ.

DevOps: GitLab CI, Heroku, Vercel, Netlify, CloudFlare, AWS.