

CARLOS EUGENIO LOPES PIRES XAVIER TORRES

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SUMMARY

Experienced software engineer with a 20-year track record in complete software solutions for mobile and web platforms. Proven expertise in leading teams, client engagement, and the entire software development lifecycle, leveraging AI-assisted coding workflows to enhance productivity. Strong background in engineering management, startups, business modeling, generative AI, and prompt engineering. Master's degree in Computer Science and Ph.D. student at [UCCS](https://uconn.edu), researching AI, machine learning, NLP, and LLMs. Interested in positions such as software engineering manager/director, or principal software engineer for web, mobile, and AI solutions. U.S. citizen.

EXPERIENCE

Oracle

Feb 2024 – Present

Principal Member of Technical Staff

Orlando, FL (remote)

- At Oracle Health & AI, leading technical design, implementation, and delivery of a mobile digital assistant that provides rich multimodal conversational experiences allowing for seamless transition across voice, text, and touch interfaces. Responsible for innovating a new paradigm of interacting with backend AI/ML-powered bots.
- Building AI digital assistants powered by powerful cloud-based LLMs, utilizing advanced prompt engineering techniques to optimize conversational accuracy, context retention, and user intent resolution.
- Tech-leading the Clinical AI Agent (CAA) mobile team, the conversational AI arm of Oracle Health & AI, building the world's largest SaaS Digital Assistant platform to enable customers to build conversational experiences for healthcare.
- Integrating generative AI strategies and AI-assisted coding tools into the development workflow to accelerate feature delivery and maintain high code quality standards.
- Using the latest mobile development frameworks for iOS and Android platforms with JavaScript/TypeScript (React Native), and natively using Swift, SwiftUI, Objective-C, Java, and Kotlin.
- Delivering scalable data solutions, practicing agile methods, and mentoring other engineers.

Oracle

Jan 2021 – Feb 2024

Principal Software Engineer

Colorado Springs, CO (remote)

- Led AdTech product development at Oracle Advertising using Python, Spark, Go, AI/ML pipelines, ETL, AWS, and OCI.
- Built a popular internal full-stack web app that helped other teams access our team's data. Used React, TypeScript, Python, FastAPI, OCI, Dataflow, Spark, and NoSQL database. It facilitated the data investigation on raw logs and impression level files (parquet files) by anyone. Via a simple and intuitive web UI in React, the users could create queries with various filtering options and submit jobs to be executed. The results were then presented, and they could save the data files, re-run a job, search for past run jobs. They could also follow the job running (with a running timer) and be alerted in their Slack account when the job finish. The web application was used by many different teams and received a lot of praise by all stakeholders.
- Built for the previous team a successful full-stack web application for campaign management that helped our customers automate campaigns and generate more revenue. Used JavaScript, TypeScript, Oracle JET, React, NodeJS, and MySQL.
- Provided innovative solutions for internet-scale data problems using agile methodologies.
- Mentored and helped other engineers to grow.

NeoTreks, Inc

Feb 2020 – Jan 2021

Senior Software Engineer

Castle Rock, CO

- Consulted and negotiated with clients, leading full application development cycles.
- Created full-stack solutions (for web, desktop, and mobile) for our customers.
- Applied expertise in mobile development (iOS and Android) and legacy code maintenance.

Cacira, Inc

Nov 2014 – Dec 2019

Director of Software Engineering

Pompano Beach, FL

- Focused on mobile solutions, project management, and backend development.
- Developed iOS, Android, and web applications using Swift, Objective-C, Dart, Kotlin, and Node.js, delivering successful products to our customers.
- Delivered complete solutions for customers, tailored for their businesses and custom requirements.
- Successfully managed projects, products, and teams in the U.S. and abroad.

Cacira Tecnologia

Jul 2010 – Nov 2014

Director of Software Engineering

Fortaleza, Brazil

- Created a startup to provide solutions for other startups and larger companies such as banks and media groups. Business development experience, with Lean Startup, mentoring, canvas business modeling, prototyping, validation, MVP.
- Developed mobile software solutions with Swift, Objective-C, Dart, and Kotlin.
- Analyzed software specifications and created database structures.
- Successfully managed projects, products, and people.

Brazilian Army

Jun 2012 – Jun 2013

2nd Lieutenant

Fortaleza, Brazil

- As an IT specialist officer responsible for managing the IT department of a military organization and a team of a sergeant and four corporals. Received military combat training.
- Designed and improved computer systems, networking, and telecommunications. Created and improved computer programs and systems to assist and optimize the military organization processes. Accomplished several military missions. Honorable discharge.

Synapsis Brasil (Tivit)

Mar 2009 – Jul 2010

Project Manager

Fortaleza, Brazil

- Managed a team of software developers.
- Helped create new and improved billing and commercial systems for utilities (electricity), achieving goals of energy savings and reliable energy consumption measurement.
- Successfully managed projects, resources, stakeholders, timelines, and budget.

Vodafone Portugal

Sep 2004 – Jan 2009

Senior Software Engineer

Lisbon, Portugal

- As a software engineer with Microsoft.NET certifications, created and supported web applications in ASP.NET with C# and SQL Server, helping to improve the commercial systems of this global mobile carrier.
- Successfully created intranet systems to aid decision-making for managers and directors.

TECHNICAL SKILLS

- **Programming Languages:** Python, Go, JavaScript, TypeScript, Swift, Kotlin, Java, Objective-C, Dart.
- **Management:** Business/Product/Team/Time/Project management, Jira, leadership, goal-oriented, communication.
- **Full stack web development:** NodeJS, Python, Go, JavaScript, TypeScript, React, Oracle JET.
- **Mobile development:** iOS, Android, React Native, Flutter.
- **Database:** Designing, development, and analysis (MySQL, Postgres, Oracle, NoSQL, MongoDB).
- **Cloud/DevOps:** AWS, Azure, OCI, Digital Ocean, Git, Docker, GitHub, BitBucket.
- **AI/ML:** ML Algorithms, LLMs, NLP, Reinforcement Learning, Generative AI, Prompt Engineering, Agents, and Assistants.

EDUCATION

University of Colorado, Colorado Springs

2021 – Present

Ph.D. in Computer Science (on going)

Colorado Springs, CO

University of Colorado, Colorado Springs

2021 – 2024

Master's degree in Computer Science

Colorado Springs, CO

- Awards: Colorado Cybersecurity Scholarship (2023, 2024).
- Graduate Research Assistant (2022, 2023).
- Cybersecurity project: ACSP4HR - SPDS (Secure and Privacy-Preserving Data Sharing for Data Science Computations) – funded by NSF. Research project presented at [ISTSS](#) (International Society for Traumatic Stress Studies) 39th Annual Meeting, Nov. 2023. System available at <https://acsp4hr.cetorres.com>. Source code and more info are available on [GitHub](#).
- Cryptography project: Homomorphic Encryption: What Is It and How Can It Help Secure Healthcare Systems. Available on [GitHub](#).
- AI/ML project: Reinforcement Learning - Maze Agent Training with Q-Learning. Available on [GitHub](#).
- AI/ML project: Reinforcement Learning - Parking Lot Agent Training with Q-Learning. Available on [GitHub](#).
- AI/ML project: Reinforcement Learning - Parking Lot Agent Training with Deep Q-Learning. Available on [GitHub](#).
- AI/ML project: Product Recommendation in Online Advertising with Reinforcement Learning. Available on [GitHub](#)

Fundacao Getulio Vargas

2009 – 2011

MBA in Project Management

Fortaleza, Brazil

Universidade Federal do Ceara

2000 – 2005

Bachelor's degree in Computer Science

Fortaleza, Brazil

LANGUAGES

- English (Fluent)
- Portuguese (Native)
- Spanish (Conversational)

INTERESTS

- AI / ML
- Science and technology
- Charity, philosophy, and spirituality
- Music (play drums, guitar)
- Home automation