

Enock Gomes Neto

04/06/1993 – 33 years old

Natal/RN – Brazil

Phone: +55 84 98849-0880 

E-mail: enocknt@gmail.com

GitHub: <https://github.com/enocknt>

LinkedIn: <https://www.linkedin.com/in/enocknt>

OBJECTIVE

Act as a Software Engineer.

PROFESSIONAL RESUME

Software Engineer with over 10 years of experience developing robust solutions in embedded systems, Android, web applications, and artificial intelligence. I'm currently contributing to the development of Brazil's TV 3.0 standard — the next generation of digital broadcasting and interactivity, built on cutting-edge technologies and international standards.

Throughout my career, I've worked on strategic projects such as the Ginga DTV Play middleware (TV 2.5), contributing to key components like Ginga-NCL, Ginga-HTML5, and Ginga-CCWS. I have extensive experience with Unix-based platforms (Android, Linux), embedded programming (ESP32, Raspberry Pi), multimedia technologies (GStreamer, FFmpeg), and modern development tools (Git, Docker, Kubernetes, CI/CD).

I'm skilled in both front-end (JavaScript, Angular, React) and back-end development (Node.js, Python, Java, C++), as well as data science and AI projects using PyTorch and Keras. On the mobile side, I develop native Android solutions using Java, NDK, and Android Studio.

I have a history of contributing to open source projects such as Android, GStreamer, and WebKit. While I am not an active contributor at the moment, I strongly value and support the open source ecosystem as a foundation for innovation and continuous learning.

 Areas of interest:

TV 3.0 | Embedded Systems | Android Development | C++ | Linux | IoT | Multimedia | Open Source | Applied AI

ACADEMIC EDUCATION

- Bachelor's Degree in **Information Technology** - Federal University of Rio Grande do Norte – Currently.
- Postgraduate Degree in **Program Analysis and Development** - Descomplica Digital College – 2023.
- Postgraduate Degree in **Multiplatform Mobile Application Projects** - Descomplica Digital College – 2023.

- Interdisciplinary Bachelor's Degree in **Science and Technology** - Federal University of Rio Grande do Norte – 2021.
- Associate Degree in Technology in **Systems Analysis and Development** - Estácio de Sá University – 2021.
- Technical Training Course for Programmers in **Web Programming** - Federal University of Rio Grande do Norte – 2011.
- Integrated Middle Level Technical Course in **Computing** - Federal Institute of Education, Science and Technology of Rio Grande do Norte – 2011.

PROFESSIONAL EXPERIENCE

MoPA Embedded Systems - August/2021 – Currently

Software Development

Position: Master Software Engineer

Acting as a Master Software Engineer in high-impact projects involving digital TV, embedded systems, and smart payment solutions.

- Leading development efforts for Brazil's next-generation Digital TV system (TV 3.0), based on the ATSC 3.0 standard, enabling advanced transmission, interoperability, and interactive features.
- Evolving the Ginga DTV Play middleware, including core components such as Ginga-NCL, Ginga-HTML5, and Ginga-CCWS, in compliance with ABNT NBR 15606 specifications.
- Designing and implementing the official test suite for the Brazilian Digital TV Forum (SBTVD), used for validating Ginga DTV Play compliance.
- Developing the Ginga-CCWS subsystem, responsible for second-screen applications and broadcast metadata management.
- Building the Ginga-HTML5 subsystem to support rich HTML5-based interactive TV applications.
- Contributing to the Ginga-NCL engine, the interactive middleware adopted in the ISDB-T standard used across Brazil and Latin America.
- Developing payment system solutions for SmartPOS (Smart Point of Sale) devices, including integration with Pix Saque and Boleto generation.

Technologies: C++, Java, Android (NDK), Embedded Linux, FFmpeg, GStreamer, JSON, digital broadcasting protocols, test automation, multimedia frameworks.

MoPA Embedded Systems - January/2019 – July/2021

Software Development

Position: Senior Software Engineer

Contributed to the development and evolution of Brazil's Digital TV middleware stack, ensuring compliance with national standards and advancing interactivity in broadcast systems.

- Participated in the development of Ginga DTV Play, including its core components: Ginga-NCL, Ginga-HTML5, and Ginga-CCWS.
- Built and maintained the official test suite used by the Brazilian Digital TV Forum (SBTVD) for validation and certification of interactive middleware.
- Worked on the Ginga-CCWS subsystem, enabling second-screen applications and managing broadcast metadata.
- Contributed to Ginga-HTML5 for executing rich HTML5-based applications in digital broadcasting environments.
- Maintained and enhanced the Ginga-NCL engine adopted by ISDB-T (Integrated Services Digital Broadcasting – Terrestrial) devices in Brazil and other Latin American countries.

Technologies: C++, Java, HTML5, FFmpeg, GStreamer, Embedded Linux, Test Automation, JSON, ABNT NBR 15606 Standards.

MoPA Embedded Systems - June/2016 – December/2018

Software Development

Position: Mid-Level Software Engineer

Worked on core middleware components for digital TV set-top boxes and contributed to embedded operating system development.

- Enhanced the Ginga-NCL middleware, enabling interactive digital TV applications in ISDB-T environments.
- Developed and maintained Zapper, a Linux-based operating system for managing and controlling set-top boxes.

Technologies: C, C++, Embedded Linux, Shell scripting, NCL, Middleware architecture, FFmpeg.

MoPA Embedded Systems - January/2014 – May/2016

Software Development

Position: Junior Software Engineer

Supported the development of middleware and embedded systems for digital TV devices and broadcast testing tools.

- Contributed to the development of the Ginga-NCL middleware used in ISDB-T set-top boxes and digital TVs.
- Participated in the creation of Zapper, a Linux-based OS tailored for digital TV devices.
- Developed TSRecorder, a tool for recording digital broadcasting streams for testing and analysis.

Technologies: C++, Embedded Linux, Digital Broadcasting Tools, FFmpeg, MPEG-TS, Middleware debugging.

MoPA Embedded Systems - May/2013 – December/2013

Software Development

Position: Software Developer (Internship)

Contributions to the enhancement and expansion of platforms for Interactive Digital TV, focusing on middleware integration and content management.

- Developed ICDi, a software extension for the ICD platform used in managing interactive TV programs with the Ginga middleware.
- Maintained the Digital Content Exchange Platform (ICD), supporting public and university broadcasters in organizing and sharing localized content.

Technologies: Java, Web Services, Ginga, ICD, Interactive TV.

Suisse Color - June/2012 – May/2013

Articles and Equipment for Photography

Position: Web Systems Developer (Internship)

Led the development of web-based systems for managing the company's photo processing services.

- Developed the "Área Profissional" platform, enabling professional photographers to manage and submit photos online.
- Built the "Impressão On-line" system, allowing customers to order photo prints through an integrated digital workflow.

Technologies: PHP, JavaScript, HTML/CSS, MySQL, Apache, Basic UX Design.

RMB Informática - July/2011 – June/2012

Computer Repair and Maintenance

Position: Web Systems Developer (Internship)

Worked on the development of custom software solutions and internal business management tools.

- Delivered tailored Web and Desktop systems for business clients across various industries.
- Helped design and build the company's ERP system, including financial and administrative modules.

Technologies: PHP, Delphi, JavaScript, HTML, MySQL, Firebird, Database Modeling.

COURSES AND QUALIFICATIONS

- **Artificial Intelligence: increase your productivity and accelerate your career** - Conquer School – 2024.
- **Digital Track | Coders 24 | Data Science** - Ada Tech – 2024.
- **Scrum Fundamentals Certified** - SCRUMstudy – 2021.

- **Information and communication technology** - Center for Technologies in Informatics Aluizio Alves (SENAI-RN) – 2018.
- **Intellectual property** - Center for Technologies in Informatics Aluizio Alves (SENAI-RN) – 2018.
- **Programming logic** - Aluizio Bezerra Technology Center (SENAI-RN) – 2018.
- **Unraveling Industry 4.0** - Center for Technologies in Informatics Aluizio Alves (SENAI-RN) – 2018.
- **Creativity and innovation** - Center for Gas Technologies and Renewable Energy (SENAI-RN) – 2018.
- **Access Networks**- Federal Institute of Education, Science and Technology of Rio Grande do Norte – 2013.
- **Transversal Skills in Entrepreneurship** - Center for Technologies in Informatics Aluizio Alves (SENAI-RN) – 2011.
- **Environmental education** - Center for Technologies in Informatics Aluizio Alves (SENAI-RN) – 2011.
- **Professional Initiation in Labor Legislation** - Center for Technologies in Informatics Aluizio Alves (SENAI-RN) – 2011.
- **Computer programmer** - Center for Technologies in Informatics Aluizio Alves (SENAI-RN) – 2011.
- **Intellectual property** - Center for Technologies in Informatics Aluizio Alves (SENAI-RN) – 2011.
- **Computer network** - Federal Institute of Education, Science and Technology of Rio Grande do Norte – 2008.
- **Basic Computing** - Protec Computing Courses – 2007.

ADDITIONAL INFORMATION

- Intermediate English.
- President of the Receiving Board of Votes in Municipal Elections - Electoral Justice - 2024.
- President of the Receiving Board of Votes in Municipal Elections - Electoral Justice - 2022.
- President of the Receiving Board of Votes in Municipal Elections - Electoral Justice - 2020.
- President of the Receiving Board of Votes in Municipal Elections - Electoral Justice - 2018.