Lennon Correa Chaves

M.Sc. and B.Sc. in Computer Engineering, CTFL/CTAL-TA Certified Tester

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Manaus, Amazonas - Brazil

Lennon Chaves received the B.Sc. degree in computer engineering and the Master degree in computer engineering from the Federal University of Amazonas (UFAM), in 2015 and 2018, respectively. He has also studied at Nokia Teaching Institute, which is a technical high school, where he started his career in computer science. Lennon has also some international certifications in software testing as CTFL (Certified Tester Foundation Level) and CTAL-TA (Certified Tester Advanced Level - Test Analyst) provided by ISTQB.

Previous Employment

Software Test Engineer   **Manaus, Brazil**
SIDIA Institute of Science and Technology   *October 2019 – Present*

- Responsible for the test case management and the requirements of Samsung models;
- Responsible for the quality assurance of Samsung model during development phase;

Software Test Engineer   **Manaus, Brazil**
CESAR Institute of Innovation   *January 2018–October 2019*

- Experience with Software Testing (regression, sanity, interoperability, stress) related to connectivity features of mobile devices such as Bluetooth, Sensors, Location,and Chromecast devices.

Software Engineer   **Manaus, Brazil**
Triad Institute   *June 2017–December 2017*

- Experience with Software Development (Android), Agile Methodologies as Kanban and Scrum. Participation in the creation of automated tests based on Espresso.

Visiting Student   **Oxford, United Kingdom**
University of Oxford   *February 2017–March 2017*

- Development of a MATLAB Toolbox to Support the Synthesis of Digital Controllers Given Physical Plants;
- Attended the Lecture "Probabilistic Machine Learning: Foundations and Frontiers" - Professor Zoubin Ghahramani (University of Cambridge);
- International Research Experience: attending meetings in research group;

Graduate Student Researcher   **Manaus, Brazil**
Federal University of Amazonas   *October 2015–January 2018*

- Core competencies in Software Verification of Unmanned Aerial Vehicles, Software and Systems Verification, Software Engineering, Software Testing and Embedded Systems;
- Experience with MATLAB and Simulink tools, Digital Systems Simulation and Design, implementation of White-Box tests, and Development of Toolboxes to reproduce the bugs found;
- Experience with BMC tools as ESBMC, CBMC, CPAChecker, Ultimate Automatizer, ESBMC using k-induction, in order to verify in C/C++ Programs properties about arithmetic under- and overflow, pointer safety, memory leaks, array bounds, atomicity and order violations, deadlock and data race;
- Experience with automated fuzzing tests, in particular, the AFL (American Fuzzing Lop) tool.

System Analyst — **Manaus, Brazil**
FPF Tech - Fundação Paulo Feitoza — *December 2013–January 2016*
- Experience with software development in Mobile, Desktop and Web Applications;
- Experience with TDD (Test Driven Development), BDD (Behavior Driven Development) and Git;
- Team experience in agile methodologies using Kanban and Scrum.

Test Developer Intern — **Manaus, Brazil**
INdT - Nokia Institute of Technology/UFAM — *May 2011–July 2012*
- Participant in a R&D project with partnership between INDT and UFAM;
- Responsible for testing web applications;
- Creation of test cases, bug/defects tracking, record steps to reproduce tests, test management and tests regression;
- Working directly with INdT employees in mobile application tests (Windows Phone);
- Experience in Tests Automation (for Web Applications using Selenium RC);
- Tools to manage the tests: Bugzilla, Mantis, Testlink, Scrumy, FireScrum and Jira;
- Framework to automation testing: JUnit and Selenium RC;

Education

Federal University of Amazonas — **Manaus, Brazil**
Ph.D in Computer Science — *2020–2023*
Project: Combining Concolic Testing with Machine Learning to Find Software Vulnerabilities in the Internet of Things
Supervisor: Prof. Dr. Lucas Carvalho Cordeiro

Federal University of Amazonas — **Manaus, Brazil**
M.Sc. in Electrical Engineering — *2016–2018*
Project: Formal Verification Applied to Attitude Control Software of Unmanned Aerial Vehicles
Supervisor: Prof. Dr. Lucas Carvalho Cordeiro

University of Oxford — **Oxford, United Kingdom**
Visiting Student, Department of Computer Science — *2017–2017*
Project: DSSynth: Synthesizing Digital Controllers Given Physical Plants.
Supervisor: Prof. Dr. Lucas Cordeiro and Prof. Dr. Daniel Kroening

Federal University of Amazonas — **Manaus, Brazil**
B.Sc. in Computer Engineering — *2008–2015*
Project: ProtectMe: An Android Application to Prevent Domestic Violence.
Supervisor: Prof. Dr. Eduardo James Pereira Souto
Overall GPA: 8.1427

Nokia Teaching Institute — **Manaus, Brazil**
Informatic Technician/High School — *2005–2008*
Project 1: Automation System to Inventory Control.
Project 2: Desktop Platform to Support on Chemistry Lessons.

Certifications

- **ISTQB Certified Tester - CTAL-TA**, Certified Tester Advanced Level, License 19-CTAL-TA-00814-BR
- **ISTQB Certified Tester - CTFL**, Certified Tester Foundation Level, License 13-CTFL-02962-BR
- **Certified ScrumMaster - CSM**, Scrum Alliance, License 000383848

Languages

- **English**: Intermediate Proeficiency. Graduated at ICBEU Manaus - Instituto Cultural Brasil Estados Unidos, 2016.
- **Spanish**: Basic Proeficiency. Graduated at Salamanca Idiomas Español, 2017

Community Service

- **Liter of Light Brazil**   **Manaus, Brazil**
  Volunteer   *May 2017 - Jan 2019*
  Operations and technology team.
- **AIESEC in Brazil**   **São Paulo, Brazil**
  National Team Leader   *December 2012 - June 2013*
  Development of national products to support team management.
- **AIESEC in Manaus**   **Manaus, Brazil**
  Vice President   *January 2012 - December 2012*
  Responsible for providing local trainings, team buildings and HR management.
- **AIESEC in Manaus**   **Manaus, Brazil**
  Exchange Coordinator   *March 2011 - November 2011*
  Responsible for preparing and supporting exchange participants.

Extra-curricular Activities

- **FUCAPI**   February 2013 - May 2013
  Young Talents Project: Trainings in Java Programming
- **Federal University of Amazonas**   May 2011 - July 2012
  Researcher Student in Software Testing
- **Federal University of Amazonas**   August 2010 - July 2011
  Researcher Student in Human-Computer Interaction
- **Federal University of Amazonas**   July 2009 - July 2010
  Researcher Student in Software Engineering
- **Federal University of Amazonas**   July 2009 - December 2009
  Instructor in Algorithms and Data Structures Course
- **Federal University of Amazonas**   January 2009 - June 2009
  Researcher Student in Wireless Sensor Network

Publications

1. **Chaves, L.**, Bessa, I., Ismail, H., Cordeiro, L., Lima Filho, E. Verifying fragility in digital systems with uncertainties using DSVerifier v2.0. In Journal of Systems and Software, pp. 22-43, Elsevier, 2018. **(Published)**
2. **Chaves, L.**, Bessa, I., Ismail, H., Frutuoso, A., Cordeiro, L., Lima Filho, E. DSVerifier-Aided Verification Applied to Attitude Control Software in Unmanned Aerial Vehicles. In IEEE Transactions on Reliability, pp. 1420-1441, 2018. **(Published)**
3. **Chaves, L.**, Bessa, I., Cordeiro, L., Kroening, D. DSValidator: An automated counterexample reproducibility tool for digital systems. In 21st ACM International Conference on Hybrid Systems: Computation and Control, 2018. **(Published)**
4. **Chaves, L.**, Bessa, I., Cordeiro, L., Kroening, D., Lima Filho, E. Verifying Digital Systems with MATLAB. In 26th ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA), pp. 388-391, 2017. **(Published)**
5. Abate, A., Bessa, I., Cattaruzza, D., **Chaves, L.**, Cordeiro, L., David, C., Kesseli, P., Kroening, D., Polgreen, E. DSSynth: An Automated Digital Controller Synthesis Tool for Physical Plants. In 32nd IEEE/ACM

International Conference on Automated Software Engineering (ASE), pp. 1-6, 2017. **(Published)**

6. Fernandes, P. **Chaves, L. C.** Bonifacio, B. Conte, T. WE QT Tool: Uma Ferramenta de Apoio a Inspeção de Usabilidade de Aplicações Web. In: X Brazilian Symposium on Human Factors in Computer Systems. (IHC 2011). **(Published)**

7. Gomes, M. Santos, D. **Chaves, L. C.** Castro, A. Vaz, V. Travassos, G. Conte, T. WDP-RT: Uma técnica de leitura para inspeção de usabilidade de aplicações Web. In: VI ESELAW – Experimental Software Engineering Latin American Workshop, 2009, São Carlos. **(Published)** (ESELAW 2009).

Awards

- **Best Master Thesis in Graduate Program in Electrical Engineering**: Federal University of Amazonas, 2019
- **Funds to Attend CAV 2017**: Verification Mentoring Workshop, CAV 2017
- **Honorable Mention in the OBI 2006**: Student participant at National Computer Olympiads in 2006
- **National Awards of AIESEC in Brazil**: 1st place in Team Leader and Team Member Experiences Program (Annual Award)
- **National Awards of AIESEC in Brazil**: 1st place in Team Leader and Team Member Experiences Program (Semester Award)
- **National Awards of AIESEC in Brazil**: 1st place in Integrated Experiences Program (Annual Award)

International Conferences

- **Computer Aided Verification** July, 2017
  Verification Mentoring Workshop Heidelberg - Germany

Professional Trainings

- Management 3.0, Management30.com, Manaus, Brazil
- Metrics for Agile Teams, CESAR School, Manaus, Brazil
- Leadership for the future, CESAR School, Recife, Brazil
- Automated Testing with Selenium Webdriver, Testing and Play, Manaus, Brazil
- Scrum Master, FPF Tech, Manaus, Brazil
- Software Testing Fundamentals, FPF Tech, Manaus, Brazil

Technical and Personal skills

- **Programming Languages:** C, C++, Java, Tex, MATLAB;
- **Software Engineering:** Agile, Continuous Integration, Scrum, Version control, Requirements analysis;
- **Software:** Atlassian Suite, Git, VirtualBox, Eclipse, Netbeans, Android Studio;
- **General Business Skills:** Good presentation skills, Works well in a team;
- **Other:** Good soldering and spot welding skills, Can write well organized and structured reports.

Interests

Program Synthesis, Software Verification, Software Testing, Embedded Systems, Unmanned Aerial Vehicles, Leadership, Project Management, Software Engineering.

References

○ Prof. Dr. Lucas Carvalho Cordeiro, The University of Manchester, United Kingdom
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  `lucasccordeiro@gmail.com`
○ Prof. Dr. Eddie Batista de Lima Filho, Federal University of Amazonas, Brazil
  Telephone: +5592988034148
  `eddie_batista@yahoo.com.br`