

# Lennon Chaves | Curriculum Vitae

M.Sc. and B.Sc. in Computer Engineering, CTFL Certified Tester

☎ +55 92 99155 6510 • 📞 +55 92 3639 7351  
✉ lennon.correach@gmail.com • 🌐 lennonchaves.github.io  
Manaus, Amazonas - Brazil

Lennon Chaves received the B.Sc. degree in computer engineering and the M.Sc. degree in computer engineering from the Federal University of Amazonas (UFAM), in 2014 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. His interests are focused on the field of automation and systems control, model checking, program synthesis, software testing and software engineering.

## Previous Employment

---

- **Software Test Engineer** **Manaus, Brazil**  
*CESAR Institute of Innovation* *January 2018–Current*
  - Experience with Automated Tests and Software Testing (regression, sanity, interoperability, stress, key performance indicators (KPI)) with Bluetooth, sensors, location, Wifi and chromecast devices. Some test cases are performed using CTS-Verifier.
- **Software Engineer** **Manaus, Brazil**  
*Triad Institute* *June 2017–December 2017*
  - Experience with Software Development (Android), Agile Testing, Agile Development (Kanban, Scrum), Technical Leadership. Involved in developed 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 Automizer, 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**

FPF Tech - Fundação Paulo Feitoza

  - 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 (agile development, pair programming and agile testing) using Kanban and Scrum.

**Manaus, Brazil**

December 2013–January 2016
- Test Developer Intern**

INdT - Nokia Institute of Technology/UFAM

  - 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;

**Manaus, Brazil**

May 2011–July 2012

## Education

---

- Federal University of Amazonas**

*M.Sc. in Electrical Engineering*

Project: Formal Verification Applied to Attitude Control Software of Unmanned Aerial Vehicles

Supervisor: Prof. Dr. Lucas Carvalho Cordeiro

**Manaus, Brazil**

2016–2018
- University of Oxford**

*Visiting Student, Department of Computer Science*

Project: DSSynth: Synthesizing Digital Controllers Given Physical Plants.

Supervisor: Prof. Dr. Lucas Cordeiro and Prof. Dr. Daniel Kroening

**Oxford, United Kingdom**

2017–2017
- Federal University of Amazonas**

*B.Sc. in Computer Engineering*

Project: ProtectMe: An Android Application to Prevent Domestic Violence.

Supervisor: Prof. Dr. Eduardo James Pereira Souto

Overall GPA: 8.1427

**Manaus, Brazil**

2008–2015
- Nokia Teaching Institute**

*Informatic Technician/High School*

Project 1: Automation System to Inventory Control.

Project 2: Desktop Platform to Support on Chemistry Lessons.

**Manaus, Brazil**

2005–2008

## Certifications

---

- **ISTQB Certified Tester - CTFL**, Certified Tester Foundation Level, License 13-CTFL-02962-BR
- **Certified ScrumMaster - CSM**, Scrum Alliance, License 000383848
- **Spanish Certificate**, Salamanca Idiomas Español, 2017
- **English Certificate**, ICBEU Manaus - Instituto Cultural Brasil Estados Unidos, 2016

## Languages

---

- **English**: Advanced Proeficiency

- **Spanish:** Intermediate Proeficiency
- **Portuguese:** Native Proeficiency

## Community Service

---

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

## Extra-curricular Activities

---

- **Campinas State University (UNICAMP)** August 2014 - December 2014  
 Extension Course in Pattern Recognition and Image Processing
- **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., Monteiro, F., Cordeiro, L., Lima Filho, E. DSVerifier v2.0: A BMC Tool to Verify Fragility in Digital Systems with Uncertainties. In Science of Computer Programming, pp. 1-27, Elsevier, 2018. **(Submitted)**
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

---

- **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

---

- Scrum Master, FPF Tech, Manaus, Brazil
- Test Driven Development, FPF Tech, Manaus, Brazil
- Exploratory Tests, FPF Tech, Manaus, Brazil
- Software Testing Fundamentals, FPF Tech, Manaus, Brazil
- Android Development, FPF Tech, Manaus, Brazil
- Android Front End, FPF Tech, Manaus, Brazil
- Automated Tests for Android (Robotium), FPF Tech, Manaus, Brazil
- Behavior Driven Development, FPF Tech, Manaus, Brazil
- Automated Tests for Images with Sikuli, FPF Tech, Manaus, Brazil
- Automated Tests for Web with Selenium, FPF Tech, Manaus, Brazil
- MVP: Minimum Viable Product, 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 organised and structured reports.

## Interests

---

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

## References

---

- Prof. Dr. Lucas Carvalho Cordeiro, University of Oxford, United Kingdom  
Telephone: +447393451110  
`lucas.cordeiro@cs.ox.ac.uk`
- Prof. Dr. Eddie Batista de Lima Filho, Federal University of Amazonas, Brazil  
Telephone: +5592988034148  
`eddie_batista@yahoo.com.br`