

# Francisco Rois

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## SUMMARY

Engineer with knowledge in software, networks, wireless communications, electronics, management and entrepreneurship. Ability to adapt and to creatively solve complex problems proven through my extensive training and experience in different professional and cultural environments.

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## EDUCATION

- May 2017 **MASTER OF INFORMATION TECHNOLOGY AND MANAGEMENT (GPA 4.0/4.0)** Chicago, IL  
*Illinois Institute of Technology (IIT)*  
Specialization in IT Management and Entrepreneurship  
Recognized with Outstanding Student Award  
Courses: Business Innovation, IT Entrepreneurship, Java, Android, Telecoms Over Data Networks.
- May 2017 **MASTER IN TELECOMMUNICATIONS ENGINEERING (MET)** Barcelona, Spain  
*Telecom BCN (ETSETB Universitat Politècnica de Catalunya, UPC)*  
Dual Degree program with IIT  
Member of BCN IEEE Student Branch  
Courses: Telecommunications Systems, Communication Networks, Overlay Networks, Advanced Communications for Wireless Systems, Electronic Systems Design for Communications.
- 2014 - 2015 **ERASMUS+ EXCHANGE PROGRAM** Vienna, Austria  
*University of Applied Sciences Technikum Wien*  
Courses of Master's Degree in Telecommunications and Internet Technologies  
Bachelor Thesis of Bachelor's Degree in Electronics and Business
- 2010 - 2015 **ENGINEERING DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES** Vigo, Spain  
*University of Vigo*  
Specialty in Electronic Systems
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## SKILLS

**Languages:** Spanish (native), Galician (native), English (proficiency).

**Technologies and tools:** Java, JavaScript, Android, Arduino, Python, Node.js, html/css, version control (Git/GitHub), relational databases (MySQL), RESTful APIs, Internet protocols (TCP/IP, UDP, etc.), VoIP (SIP, RTP, SDP), WebRTC, wireless technologies (Bluetooth, Wifi, etc.), cloud platforms (AWS, Heroku).

**Software:** Sublime Text 2, Eclipse, Android Studio, Wireshark, Postman, Terminal.

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## EXPERIENCE

- 2016 - present **FULL STACK ENGINEER & RESEARCH ASSISTANT @ IIT RTC LAB** Chicago, IL  
*BOSSA Platform: Bluetooth and Sensors Array. Next Generation 911.*  
Designed, created and tested central platform (BOSSA) for the Indoor Location System:
- Support for sensors' atmosphere data (temperature and humidity) collection, storage and retrieval.
  - System's resources availability through APIs.
  - Indoor Location Server role, testing and deployment tools for the NG911 Indoor Location System.
  - Standardization, security and control over internal interactions.
  - Creation procedures and support for new infrastructures. Homogenization of processes and modularity.
  - Platform built on scalable technologies.
  - Website for documentation, publishing and internal operations (<https://api.iitrtclab.com>).
- Technologies: Node.js, Sails.js, JavaScript, iBeacon, BLE, Android OS, MySQL, EJS, Bootstrap, Express.js.  
Tools: Git/GitHub, Heroku, AWS (EC2, RDS, Route 53), NPM, Postman, Sublime Text 2, Terminal.
- 2015 **ENGINEER INTERN** Santiago de Compostela, Spain  
*MoonOff – Blusens. Hardware and Lightning Solutions.*
- Development of projects and quality control, methods and times in technical departments and R&D.
  - Designed and implemented detailed process reports for light systems and electronics set up, which were used as model for assembly line.
  - Collaborated in the department of product testing and validation, elaborating reports that determined exclusion or inclusion of products in the company's catalogue, and improving processes' efficiency.

## PROJECTS

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|----------------|---|------------------|
| 2016 - present | <b>NG911 PROJECT (NEXT GENERATION 911) @ IIT RTC LAB</b><br><i>Bluetooth Indoor Location for mobile phones calling for Emergency Services.</i> <ul style="list-style-type: none"><li>• Platform for developers, RESTful APIs and Android User Application.</li><li>• Skills: Node.js, Sails.js, JavaScript, RESTful APIs, MySQL, GitHub, Android, Heroku, AWS, presentations.</li></ul>   | Chicago, IL      |
| 2017 - present | <b>KEEPMOVING PROJECT</b><br><i>System for gamification of physical activity (run and walk) and encouraging healthy habits.</i> <ul style="list-style-type: none"><li>• APP for mobile devices.</li><li>• Currently consolidating the Business Plan and in first stages of development.</li><li>• Skills: leadership, product management, business planning, teamwork, presentations.</li></ul>   | Chicago, IL      |
| 2017           | <b>CAMPUS 1871</b><br><i>Entrepreneurship Hackathon hosted by 1871.</i> <ul style="list-style-type: none"><li>• Weekend-long event including crash courses, keynote speakers, mentorship and pitches.</li><li>• Created with a team a viable business model for a potential startup company.</li><li>• Skills: entrepreneurship, business planning, coaching, design, teamwork.</li></ul>   | Chicago, IL      |
| 2016           | <b>ORDER APP PROJECT</b><br><i>System to order in bars and restaurants from mobile devices.</i> <ul style="list-style-type: none"><li>• Two complementary Android applications: Client APP and Bar APP.</li><li>• Skills: leadership, project management, teamwork, Android programming.</li></ul>  | Chicago, IL      |
| 2016           | <b>MTP TELECOMMUNICATIONS PROJECT</b><br><i>Engineering competition in the framework of the course Management of Telecoms Projects.</i> <ul style="list-style-type: none"><li>• Designed from scratch and implemented two identical TX/RX modules able to transmit and receive a data file in a limited time.</li><li>• Team of seven engineers awarded with the second prize in the competition.</li><li>• Skills: teamwork, project planning, electronics design and manufacturing.</li></ul>   | Barcelona, Spain |
| 2015           | <b>OACC PLATFORM: ONLINE ACADEMIC CATALAN COMMUNITY</b><br><i>European BEST Engineering Competition.</i> <ul style="list-style-type: none"><li>• Case Study organized by the Board of European Students of Technology.</li><li>• Designed the concept for a unified platform used by the Universities in Catalonia.</li><li>• Team awarded with the third prize in the competition.</li><li>• Skills: teamwork, efficient problem solving, presentation in front of a jury and audience.</li></ul>  | Barcelona, Spain |
| 2015           | <b>DRONE TRICOPTER: DESIGN, BUILD AND TEST</b><br><i>IEEE Students Branch BCN.</i> <ul style="list-style-type: none"><li>• Multidisciplinary project, including electronics, robotics and software development.</li><li>• Collaborated in all the phases of the project, from the design to the final successful test.</li><li>• Skills: interdisciplinary collaboration, teamwork, understanding of unpredictable project inconveniences, time managing and planning in engineering projects.</li></ul>  | Barcelona, Spain |
| 2014 - 2015    | <b>RFID SYSTEM FOR ASSETS MONITORING</b><br><i>Bachelor Thesis in Electronics and Business Department.</i> <ul style="list-style-type: none"><li>• Designed and implemented a completely operating RFID tags reading system.</li><li>• Tools and technologies: Arduino and RaspberryPi platforms, analog and digital electronic components.</li><li>• Skills: Python and Arduino programming, RaspberryPi, research project development, project time planning, technical report elaboration, presentation in front of a jury and audience.</li></ul> | Vienna, Austria  |

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**PERSONAL** Drums player and music enthusiast, runner, cinephile, traveler, keen on new experiences and always willing to learn.