

# Ivan Tadeu Ferreira Antunes Filho

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## Comp. Science and Electrical Eng. & Math. - MIT MEng 2018

### Experience

- Fall 2017 **Teaching Assistant**, 6.006 Introduction to Algorithms - MIT, Cambridge, MA.
- Summer 2017 **Performance Researcher**, QUANTLAB, Boston, MA.  
Helped design and improve a Domain Specific Language used by Quantlab's trading system. Details protected by NDA.
- Summer 2016 **Software Engineering Intern – Neko Team**, FACEBOOK, Seattle, Wa.  
Improved organic post logging in mobile using [HackLang](#) and [PHP](#) and created pipelines and an API endpoint to analyze publishers Return On Ad Spend using [Hive](#), [Presto](#) and [Mysql](#).
- Summer 2015 **Software Engineering Intern – Search Quality Team**, INDEED, Austin, TX.  
Developed visualization tools for user data using [Javascript](#) and [HTML 5](#). Created a webapp to help identify user metadata in Indeed's Visualization tools. Created a small library in [Java](#) for converting logged data in Hadoop. Changed the data storage format used for ads personalization. Added filters to Indeed's AB testing interface
- Summer 2014 **Software Engineering Intern – Search Quality Team**, INDEED, Austin, TX.  
Made the generation of snippets on the main company website 80% faster, recognizing non-obvious bottlenecks with the use of profilers. Rewrote performance critical job indexing code using [Intel Intrinsics](#), [C](#) and [C++](#)
- Fall 2013 **Undergraduate Researcher**, CAMERA CULTURE, MEDIA LAB, MIT, Cambridge, MA.  
Programmed [Matlab](#), doing basic signal analysis for the "Frequency Based Spatial Encoding for Single Sensor Sonar and Medical Ultrasound" research. Paper available on [tinyurl.com/see-corners](http://tinyurl.com/see-corners)

### Awards

- 2009-2013 **Science Olympiads**, Self taught Physics, Astronomy, Chemistry, Linguistics, Biology, Math, Pascal and C++ with 29 national awards and 11 international awards..
- International Physics Olympiad Gold Medal (2012, Estonia)
  - International Astronomy and Astrophysics Olympiad Silver Medal (2012, Brazil)
  - International Linguistics Olympiad Silver Medal (2012, Slovenia)
  - World Physics Olympiad Silver Medal (Dec 2012 - Jan 2013, Indonesia)
  - Iberoamerican Biology Olympiad Silver Medal (2012, Portugal)
  - International Science Junior Olympiad Gold Medal (2010, Nigeria)
  - Brazilian Informatics Olympiad Silver Medal (2011, Brazil)
- Jan 2015 **MASLAB - Cocoabot**, 1<sup>st</sup> place team at the MIT Autonomous robots competition.  
We built Cocoabot, a robot capable of finding cubes on a field and stacking them by color. Cocoabot had around **10.000 lines of C++11** code, split in 10 threads, running in an Intel Edison. I was responsible for integrating the modules, writing the skeleton code for the threads, designing the state machine and the motor-controllers code, debugging the code with [GDB](#) and finding memory leaks. Documented on [tinyurl.com/cocoabot](http://tinyurl.com/cocoabot).

### Projects

- Summer 2016 **Static typed website**, For parent's business in Brazil.  
Created a single page static website using Hugo ([Go](#)), [HTML](#), [CSS](#), [Js](#). Available on [github.com/itf/lazuli](http://github.com/itf/lazuli)
- Jan 2016 **Iron Curtain 2**, 30x60 LED Panel.  
Organized the construction of a 30x60 pixels (2m by 1m) LED Panel in 4E, MIT, and wrote functional programming code in [Python](#) to control and combine the patterns displayed by the panel, on [github.com/itf/iron-curtain-2](http://github.com/itf/iron-curtain-2)
- 2015-2016 **4E Hall projects**, Bemix(centralized music system); Hall Wiki, Printers and Servers. Project Fund.  
Added Youtube streaming on Bemix. Maintains the 4e wiki and printers and servers. Organized hall's "project fund".
- Fall 2015 **Tool Tracker (Hack MIT 2015)**, Open Source time management project.  
Contributed to a time tracker project for Linux (track), in [Python](#), and adapted it for an MIT class time tracker.
- 2010-2014 **OlimpiadasCientificas.com**.  
First Brazilian website to help high school students and teachers to participate in Science Olympiads. ~500 visits per day, made with wordpress.org. It was cited by the largest Brazilian newspaper in 2012, [tinyurl.com/ocientificas](http://tinyurl.com/ocientificas).

### Academics and Various

- Courses** ○ Comp. Systems Security ○ Comp. and Network Security ○ OS Eng. ○ Comp. Networks ○ Machine Learning  
4.5 GPA ○ Design and Analysis of Algorithms ○ Advanced Algorithms ○ Power Electronics Lab ○ Robotics: Science and Systems 1 ○ Theory of Computation ○ Algebra I-II ○ Principles of Discrete Applied Math ○ Real Analysis  
○ Signals, Systems, and Inference ○ Discrete-Time Signal Processing ○ Information Acquisition and Proces.

- Languages** ○ Portuguese, ○ English