

# Juan Sebastián Barbosa

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🌐 [www.github.com/jsbarbosa](https://www.github.com/jsbarbosa)

Candidate to the bachelor degree of Physics and Chemistry with several years of experience as a teaching assistant of courses in Physics and Computational Methods. Skills in identifying and solving problems in multiple areas of knowledge. Motivated by acquiring new knowledge and developing or improving tools that generate positive impact on all types of users. Passionate about the development of knowledge in the world of programming and its application in different areas of research and industry. Ability to work under pressure, within multidisciplinary teams, with leadership skills in the implementation and development of ideas and the subsequent visualization of results.

## Education

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### Academic training.....

- **Universidad de los Andes** **Colombia**  
*Physics student, 4.01/5.00* *2013–Present*
- **Universidad de los Andes** **Colombia**  
*Chemistry student, 4.01/5.00* *2014–Present*

## Work experience

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### Academic.....

- **Universidad de los Andes, Centro de Microscopía** **(Microscopy center)**  
*Research assistant* *January 2018–Present*  
<https://investigaciones.uniandes.edu.co/es/microscopia/>
  - Administrative tasks: generation of quotes and user service
  - Laboratory assistant: management of the Confocal Laser Scanning Microscope, and fluorescence microscopes
  - Analysis of microscopy images
  - Developer of the software for the centralization of user requests (Microbill, 🐙/microbill, [Python](#))
  - Developer of the software for the data extraction of the Atomic Force Microscope (Igor Extractor, 🐙/SPM, [Python](#))
- **Universidad de los Andes, Departamento de Física** **(Physics Department, Computational methods)**  
*Teaching assistant of Métodos Computacionales* *August 2016–December 2017*
  - Proposal of exercises and workshops
  - Development of the libraries: [astrohut](#) (🐙/astrohut, [Python](#)), [rippleTank](#) (🐙/rippleTank, [Python](#)) and a series of computer demonstration experiments <https://github.com/ComputoCienciasUniandes/Demonstrations>
- **Universidad de los Andes, Departamento de Física** **(Physics Department, Physics 1)**  
*Teaching assistant of Física I* *August 2015–May 2016*
  - Development of methodologies that allow tracking the failures or progress of students
- **Universidad de los Andes, Departamento de Física** **(Physics Department, Astrobiology)**  
*Teaching assistant of Astrobiología* *January 2015–May 2015*
  - Enriching and fundamental experience for the formation and the discovery of potential and interest in the field of teaching and the search for knowledge

## Industrial.....

### ○ Tausand Electronics

*Software Developer*

*January 2017–Present*

Tausand is a scientific instrumentation development company. <https://www.tausand.com/>

- Currently responsible for developing the software Abacus ([Python](#)), which allows to use the coincidence counter that bears the same name
- Microcontroller programmer for various applications of the company

## Extracurricular activities

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### ○ SymPy

*Colaborator, 1/822 coauthors*

*Present*

<https://github.com/sympy/sympy/blob/master/AUTHORS>

- Occasional collaborator in the development of the library [SymPy](#) for the symbolic calculation in [Python](#)

### ○ Machine Learning for Quantum Matter and Technology

**Décima Escuela de Física Matemática**

*Participant*

*May 27-31 2019*

[https://matematicas.uniandes.edu.co/~cursillo\\_gr/escuela2019/index.php](https://matematicas.uniandes.edu.co/~cursillo_gr/escuela2019/index.php)

### ○ Expociencia, Uniandes en Corferias

*Exhibitor*

*Octubre 29-31 2018*

<https://ingenieria.uniandes.edu.co/Paginas/Noticias.aspx?nid=429>

<https://medicina.uniandes.edu.co/index.php/es/facultad/noticias/448-expociencia-2018>

- Science disseminator for the attending public

- Presenter of demonstration experiments with microscopes from Centro de Microscopía of Universidad de los Andes

### ○ Python Bootcamp Uniandes, Universidad de los Andes

*Organizer*

*April 29-30 2017*

<https://pythonbootcampuniandes.github.io>

- Development and presentation of the solutions to the exercises proposed during the workshops

### ○ 56 projects on GitHub

*Content generator and opensource enthusiast*

*July 2016–Present*

<https://github.com/jsbarbosa>

- Believer of the opensource community. Partly I am, thanks to those who spread their projects, and allowed me to learn from them. Reason why I publish my projects of free time, with the hope of giving back a little the generosity of the community that has given me so much

- **Frequent user of:** Jupyter, NumPy, Matplotlib, SciPy, SymPy, Pandas y PyQt. **With medium and low frequency:** Pillow, scikit-image, scikit-learn, Django

## Skills

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### ○ Programming: Linux user

- **Advanced:** C, Python,  $\text{\LaTeX}$ , and Bash
- **Intermediate:** Java

### ○ Communication: Fluent English. IELTS certificate (7.0/9.0)