

Eric Brandwein

Computer Scientist

Experience

- August 2024 – Present **University Teaching Assistant (Jefe de Trabajos Prácticos)**, *Departamento de Computación, Facultad de Ciencias Exactas y Naturales, UBA*, Buenos Aires, Argentina.
- October 2023 – August 2024 **University Teaching Assistant (Ayudante de 1ra)**, *Departamento de Computación, Facultad de Ciencias Exactas y Naturales, UBA*, Buenos Aires, Argentina.
Teaching the third-year course of Técnicas de Diseño de Algoritmos on algorithm design and analysis, with topics on dynamic programming, greedy algorithms, and graph algorithms. This includes preparing and giving lectures, building take-home exercises and exams, as well as grading exams and homework.
- January 2022 – July 2022 **Software Engineer**, *Wildlife Studios*, Buenos Aires, Argentina.
Development of the mobile infrastructure used to display ads in games for Android, iOS, and Unity, including contributions that directly affect the revenue. Languages used include Kotlin, Swift, Objective-C, and C#, among others.
- August 2021 – December 2021 **Software Engineering MTS**, *Mulesoft*, Buenos Aires, Argentina.
Quality Automation Engineering, working on the end to end tests in TypeScript for the product.
- March 2021 – August 2021 **Software Engineer II**, *Medallia*, Buenos Aires, Argentina.
Member of the Test Infrastructure Engineering team, working in projects in a variety of languages and frameworks, including Flask, Node.js, and Java.
- February 2019 – February 2020 **University Teaching Assistant (Ayudante de 2da) of Algorithms and Data Structures**, *Departamento de Computación, Facultad de Ciencias Exactas y Naturales, UBA*, Buenos Aires, Argentina.
Teaching first year students how to write their first programs in C++.
- February 2018 – February 2020 **Programming Tutor**, Buenos Aires, Argentina.
Teaching Java, Android, and Python programming to high school students.
- March 2015 – March 2017 **Software Engineer**, *Mercadolibre*, Buenos Aires, Argentina.
Three-month training course, learning Java, SQL, HTML, CSS, and others. Then, mainly developing the Android native app, but also working with the Groovy/Grails and Node.js frameworks. During this time, I almost completely re-developed the company's home view for the Android app.

Education

- 2023–Present **PhD in Computer Science**, *University of Buenos Aires*, Buenos Aires, Argentina.
On the topic of Graph Parameters and Parameterized Algorithms.

- 2015–2022 **Computer Science Master**, *University of Buenos Aires*, Buenos Aires, Argentina. Marks average of 8.9 out of 10. Presented a master's thesis on an algorithm to compute the thinness of a tree graph in $\mathcal{O}(n \cdot \log(n))$ time; a new result in the field. This development was later presented at the International Symposium on Combinatorial Optimization (ISCO) of 2022, and published on Springer Link: https://link.springer.com/chapter/10.1007/978-3-031-18530-4_14. The same thesis includes results on the thinness of other graph classes, such as grid and crown graphs.
- 2010–2014 **Bachelor with orientation on Information Technology**, *ORT High School*, Buenos Aires, Argentina.

Publications

- Bonomo-Braberman, F., Brandwein, E., Oliveira, F. S., Sampaio, M. S., Sansone, A., Szwarcfiter, J. L. (2024). Thinness and its variations on some graph families and coloring graphs of bounded thinness. *RAIRO-Operations Research*, 58(2), 1681-1702.
- Bonomo-Braberman, F., Brandwein, E., Gonzalez, C.L., Sansone, A. (2022). *On the Thinness of Trees*. In: Ljubić, I., Barahona, F., Dey, S.S., Mahjoub, A.R. (eds) *Combinatorial Optimization. ISCO 2022. Lecture Notes in Computer Science*, vol 13526. Springer, Cham. https://doi.org/10.1007/978-3-031-18530-4_14

Languages

Spanish	Native	<i>Born and currently living in Argentina</i>
English	Fluent	<i>CAE, University of Cambridge</i>
Italian	Good command	<i>Trilingual Elementary School, and Italian family</i>
French	Basic	<i>6-month course with a native French professor</i>

Other certificates

- Member of the team placing third on the 2019 and 2020 Argentinian Programming Tournaments (TAP).
- A total of 11 medals and recognitions in the National Argentinian Olympiads of Informatics (OIA) and Mathematics (OMA), including national Gold Medal at 14 years old.
- Cambridge Certificate of Advanced English (CAE).

Other Projects

Contributed to many open source projects, including [the Django framework](#) and [Pharo](#). These can be seen on [my GitHub page](#). My most recent contributions were made to [Cuis](#), a Smalltalk distribution; and [QED](#), a page where university students can upload and solve exercises. Also, avid competitor on [Codeforces](#).

Other Interests

Musical Theater, Boulderling, Competitive Programming, and Tabletop Gaming.