Augusto Kielbowicz

he/him/his

As a problem-solver at heart, I thrive on tackling challenges by leveraging my diverse skill set and experiences.

I hold a degree in Physics, which honed my ability to model problems by seeking simpler, yet effective solutions and finding the right level of abstraction.

Professionally, I have been working as a Quantitative Developer and Software Engineer, specializing in numerical code for Valuation and Risk computation in Multi Asset Class systems. My production code experience spans Python and C#, while I prefer Julia for Research and EDA, and use Python or Powershell for tooling and scripting in Windows environments.

My curiosity has led me to explore functional languages, resulting in the development of DSL POCs in F# and Clojure. Additionally, I participate in a reading group of Computational Category Theory book, using OCaml.

I enjoy thinking in stochastic terms, considering possibilities and their potential consequences. And continuously seek out new opportunities to apply my analytical skills and passion for problem-solving.

Education

Licentiate degree in Physics, University of Buenos Aires (2011-2017)

Thesis: Statistic Analysis and Numerical Modeling of Single Particle Trajectories: Diffusion and Confinement Mechanisms

Experience

Software Development

SimCorp (03/2024 - present | 5M)

Associate Principal, Core Analytics

```
- Integrate Quant UI with the pre-existing Axioma Risk UI, enhancing user
interaction and analytical capabilities.
- Develop a Proof of Concept (POC) for a Domain-Specific Language (DSL) to
facilitate interaction with pricing models.
- Create a POC for an interactive Q&A chatbot for product documentation, utilizing
Large Language Models (LLM) and Retrieval-Augmented Generation (RAG).
- Redesign libraries to support Automatic Differentiation (AD) and collaborate with
third-party providers to integrate AD tooling.
```

Qontigo (09/2020 - 03/2024 | 3Y7M)

@akielbowicz-qontigo

Associate Principal, Core Analytics (02/2023 - 03/2024 | 1Y2M)

```
- Manage junior developers, providing guidance and support to enhance their skills
and productivity.
- Maintain and develop core Quant Analytical libraries, ensuring robustness and
accuracy.
- Design and develop a new component library for curve construction and operation,
```

including rates, yields, discounts, and spreads.
- Design and lead the development of a UI based on `ipywidgets` and `voila`, enabling interactive usage of Quant libraries.
- Manage the deployment of containerized applications to Azure, ensuring smooth and efficient operations.

Associate, Core Analytics (09/2020 - 02/2023 | 2Y6M)

- Manage a research internship focused on the application of NeuralSDE for European Option Pricing using Julia.
- Design and develop the infrastructure for a C# Monorepo for Analytical Libraries, streamlining the extraction of quantitative and numerical code from a monolithic repository.

J.P. Morgan (07/2018 - 08/2020 | 2Y2M)

Technology Analyst, Rates CIB.

- Develop infrastructure for the migration of reporting services from Kapital (SmallTalk) to Athena (Python).
- Provided critical support to the Rates Quant team, enhancing analytical capabilities and operational performance.

Open Source (02/2016 - present | 8Y)

@akielbowicz

- Work on de development of interactive materials for education based on Jupyter.

Teaching Experience

University of Buenos Aires

- Undergraduate courses on Calculus and Linear Algebra, CBC Engineering (12/2020 - 07/2022 | 1Y8M).
- Teacher Assistant on Summer Course of Optics and Thermodynamics for Biology and Geology (02/2015 - 03/2015 | 2M).
- Science Communicator on the Physics Department (03/2013 - 12/2014 | 1Y10M).

Southern International School

- High School teacher of Physics, Mathematics and Information Technologies.

Publications

- Shared Memory Semi-Implicit Solver for Hydrodynamical Instability Processes (2023)
- Photon Counting Module based on Avalanche Photo-Diodes (2017)

Talks and Workshops

I participate actively in technology meetups and conferences as a speaker and collaborator you can see all my talks here.
