Matias P. **Borghi Orue**

Full-stack Web Developer · MSc. Physics

Alberti 2640, Mar del Plata, 7600, Buenos Aires, Argentina

(+54) 9 11-2157-6504 | borghi.matias@gmail.com | mattborghi.github.io | mattborghi | mattborghi | borghimatias

Summary

Web Developer with 5+ years of experience both in the IT and in the Finance Industry. Currently working for Ekumen Labs as a staff augmentation contractor for one of the FAANG companies. Accountable, self-taught, inquisitive, teamwork player.

Work Experience

Ekumen Labs

Remote

Web Developer — *Dec. 2021 - Present*

- Front end engineer consultant in a high-paced team for one of the FAANG companies.
- Applying Scrum methodologies to software development.
- Working in the front end team helping with the development of new features for the application.
- Making short presentations about the new features that are available to use to the rest of the team.
- Responsible for creating technical documentation.
- Used React Typescript using Vite along with Redux for state management and redux-observable for async management.

Ekumen's Internal Work — *Dec. 2021 - Present*

- Migrate old AngularJS messaging project to React.
- Collaborate by solving bugs in an internal project that used React and Node.Js used for handling holidays, days off and much more.
- Created and presented a Three.Js workshop to internal employees.

Crisil Limited

Buenos Alres, Argentina

Sr. Quantitative Analyst — *Jun. 2021 - Nov. 2021*

- Consultant for Tier-1 US investment bank in the Wealth Management Division.
- Working with a vendor (third-party) model that uses deep learning techniques in order to price stocks and gain insight into portfolio management investing.
- Responsible for creating technical documentation.
- Creation and execution of benchmarking analysis, back testing, stress and stability tests, among others.
- Engage on weekly model updates and discussions with vendor and bank associates.

Quantitative Researcher — *Mar. 2019 - May. 2021*

- Working in a R&D team in the development of a high-performance library designed to achieve fast and advanced quantitative finance calculations, including: Monte Carlo universal pricing engine for exotic equity products; Greeks computation via automatic differentiation; domain specific language (DSL) design and implementation for syntactically-sweetened inputs.
- Development of cutting edge Machine Learning and Deep Learning solutions for pricing products with early exercise features in both high and low dimensions.
- Technical leader in charge of the development, maintenance, testing, documentation and deployment of web applications using high standards for microservice deliveries, including: frontend development; backend development; GraphQL API endpoints; documenting solution architecture; automated cloud migration environments.
- Responsible for creating a rapidly working prototype by designing the frontend interface using React.js and communicating via GraphQL APIs to a Django backend that consumes Julia workers.
- Preparing presentations of technical advances to senior management stakeholders.
- Developed a JWT-based authentication system that allowed users with credentials to access the application.

Quantitative Analyst — *Aug. 2017 - Feb. 2019*

- Consultant for Tier-1 US investment bank - Equity and Hybrids Group. Front Office.
- Pricing and Risk Management Equity and Hybrid (IR/FX/COMM) exotic financial derivative models for a Tier-1 US Investment Bank.
- Responsible for creating technical documentation and generating executive summary reports in LaTeX.
- Scrutiny of pricing methodology, model soundness and test suite design. Creating and executing calibration, benchmarking, computational performance, hedging, limiting cases, stability and convergence tests using C#/Excel.

Institute of Physics of Liquids and Biological Systems (IFLySiB)

La Plata, Buenos Aires, Argentina

Physicist — *Aug. 2016 - Aug. 2017*

- MSc. in Physics graduate dissertation: Study of phase transitions of an Ising-type model with spin oriented dependent interaction parameters.

National University of La Plata (UNLP)

La Plata, Buenos Aires, Argentina

Teaching Assistant — *Sep. 2015 - Sep. 2017*

- Responsible for teaching fundamental physical concepts such as Classical Mechanics and Electromagnetism to undergraduate students.

Argentine Institute of Radio Astronomy (IAR) *Berazategui, Buenos Aires, Argentina*

Research Project Collaborator *Nov. 2014 - Dec. 2015*

- Responsible for the development of a software package that assess the possibility of radio emission detections from extensive air showers induced by cosmic rays.
- This work was presented as a poster at the 100th Annual meeting of the *Argentine Physics Association* (AFA) from the 22nd to 25th of September of 2015 in Villa de Merlo, San Luis, Argentina.

Projects

Background Tasks Queue *Jan. 2021*

- Project implementing a background tasks/jobs queue with React as frontend, Python (Django) to process the requests and Julia to run the jobs communicating using RabbitMQ.
- Deployed using Heroku, GitHub pages and CloudAMQP.

Julia Editor on the Web *Feb. 2021*

- A minimal working project that handles Microsoft's Monaco Editor on the web with Julia's syntax highlighting and a dedicated Julia Language Server that allows a certain user to have full access to package documentation, suggestion and snippets, among other things.
- Built using React.js, Node.js and Julia.

Julia Terminals on the Web *Mar. 2021*

- A minimal working project that handles multiple pseudoterminals running Julia on React. It's UI design is based on VSCode and Atom IDEs.
- Built using React.js, Node.js and Julia.

Education

National University of La Plata (UNLP) *La Plata, Buenos Aires, Argentina*

MSc. in Physics *Mar. 2010 - Aug. 2017*

Skills

DevOps	Docker, Heroku
Back-end	Django, REST API, gRPC, GraphQL, Node.js
Front-end	Redux, React
Programming	Javascript, Python, Julia