David Munoz-Tord

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SUMMARY

Results-driven Data Scientist and Engineer with over 5 years of experience in pharmaceutical research and financial technology. Proven expertise in developing scalable RShiny applications, deploying machine learning solutions, and implementing advanced predictive models using Bayesian methods. Skilled in R, SQL, AWS cloud infrastructure, and data visualization with a strong background in statistical analysis and data engineering. Demonstrated success in customer behavior classification, fraud detection, and risk modeling.

SKILLS

R, RShiny, SQL, Data Visualization, Data Engineering, Machine Learning, AWS - Cloud, Python, Git - CI/CD, Statistical Analysis, Data Analysis, Web Development, Docker - ML OPS, TensorFlow, Keras

WORK EXPERIENCE

We Data   **Oct 2022 - Present**
Data Science Consultant   *Switzerland / Japan*

- Collaborated with pharmaceutical and biotech clients on data-driven research projects, leveraging computational modeling and advanced statistical techniques.
- Developed data infrastructure solutions for multiple clients, implementing process automation and cloud-based data management systems.
- Conducted complex data analysis and predictive modeling across diverse industry domains, including healthcare and financial technology.

FlowBank   **Apr 2022 - Jan 2024**
Full Stack Data Scientist   *Switzerland*

- Architected machine learning-powered fraud detection systems utilizing ensemble methods, achieving statistically significant reduction in false positive rates.
- Developed advanced customer segmentation models using hierarchical Bayesian inference, generating probabilistic clustering with 92% accuracy.
- Designed cloud-native data engineering infrastructure on AWS, implementing scalable microservices architecture for data orchestration.
- Developed internal R packages to streamline data analysis workflows, enabling standardized data processing across teams.
- Created comprehensive R Shiny dashboards for real-time performance monitoring, featuring interactive data visualization and dynamic reporting capabilities.
- Implemented probabilistic Marketing Mix Modeling (MMM) using Bayesian statistical techniques to quantify multi-channel marketing effectiveness.
- Constructed stochastic risk forecasting models with confidence intervals for Swiss banking regulators, integrating machine learning predictive techniques.

University of Geneva   **Sep 2020 - Jan 2022**
Lecturer in Biostatistics   *Switzerland*

- Conducted lectures on statistics for the graduate program and mentored students in their research projects, providing guidance on statistical analysis and data visualization.
- Created and shared freely available data workshops in R and Python.

Novo Nordisk   **Mar 2020 - Jan 2022**
Research Scientist   *Switzerland*

- Pioneered computational neuroscience research on metabolic pharmaceuticals, focusing on GLP-1 receptor agonists' neurological and sensory mechanisms.
- Developed advanced data processing pipelines for large-scale clinical trial datasets, applying state-of-the-art computational techniques.
- Collaborated with international research teams to implement cutting-edge neuroimaging denoising techniques, securing research grants and maintaining rigorous medical data management protocols.
- Produced peer-reviewed publications demonstrating complex data analysis in pharmaceutical research contexts.

PROJECTS

EcoCalc   **Jan 2022 - Present**
Founder/Lead Developer

- Developed a comprehensive platform for chemical product environmental impact assessment.

- Engineered scalable data infrastructure for ecological certification processes.
- Implemented advanced algorithms for environmental data analysis.

DbVieweR   **Jan 2022 - Present**
Creator

- Developed a comprehensive Shiny-based database management system.
- Implemented robust authentication and database manipulation features.
- Created flexible backend support for PostgreSQL and SQLite.

hBayesDM   **Jan 2022 - Present**
Collaborator

- Contributed to hierarchical Bayesian modeling library for decision-making tasks.
- Implemented Q-learning algorithm for probabilistic selection tasks.
- Developed advanced statistical modeling techniques for neuroeconomics research.

echarts4r   **Jan 2022 - Present**
Collaborator/Maintainer

- Expanded interactive visualization capabilities in R.
- Developed high-performance rendering engine for complex data visualizations.
- Widely adopted in pharmaceutical and research sectors for data reporting.

fiRebase   **Jan 2022 - Present**
Collaborator/Maintainer

- Created comprehensive Firebase integration package for R.
- Implemented secure user authentication and file storage mechanisms.
- Enhanced Shiny application development capabilities.

EXTRACURRICULARS

Rocket-Courrier   **Jan 2017 - Present**
Co-founder

- A socially responsible Bike Messenger cooperative in Geneva.
- Led the technical infrastructure.

EDUCATION

Ph.D. Candidacy in Computational Neurosciences   **Mar 2020 - Jan 2022**

MSc in Computational Neurosciences   **Sep 2018 - Mar 2020**

Complementary Studies in Computer Science   **Sep 2017 - Jun 2018**
                                                                                GPA: 3.84

BSc in Cognitive Science   **Sep 2014 - Jun 2017**

CERTIFICATIONS

Top 2% on StackOverflow
Top 2% on StackOverflow(2024)

Top 25%
Top 25% on GitHub (2023)

Global Fellow scholarship
Global Fellow scholarship (2017)

Top 2%
Top 2% on StackOverflow (2024)