

Job Description

Position:	COVID Epidemiologist / Modeller
Reports To:	COVID Senior Lead
Tier:	Management
Department:	Consulting
Location:	Remote until further notice
Status:	Full time, permanent

Key Role

The COVID Epidemiologist / Modeller harnesses in-depth COVID/Pandemic modelling knowledge and resources to review, refine and enhance Scarsin's COVID Decision Support model(s) to provide the best solution to clients in support of COVID decision making. This role is critical in ensuring the core model and math supports current and future scientific insights into Pandemic modelling. This role works directly with client teams in Epidemiology and other Public Health and Hospital roles to ensure the best possible and most consistent delivery of decision support insights to clients.

Duties and Responsibilities

- Prepares background information to support forecasting by collecting and collating COVID intelligence;
- Analyzes trends and identifies key drivers of COVID
- Lead the delivery of innovative and accurate customer-facing epidemic and pandemic spread predictions using forecasting, simulations, and statistical techniques
- Develop and enhance complex ODE mathematical models
- Collaborate with product developers and data engineers to build the code and automation capabilities for predictive models
- Support prediction methods for enhanced solutions in COVID-19
- Summarize and communicate complex forecasting scenarios and corresponding product enhancements in simplified presentations to analysts, senior leadership, and clients
- Develop and maintain a prediction & forecasting 'roadmap' with key research and product development milestones
- Develop and implement a framework for systematic validation of predictions using observed data
- Collaborate with Scarsin COVID solution leadership (eg. Surveillance, Data Engineering, Technology, Design) during product development cycles and to ensure the success of projects
- Maintain documentation on data, methods and model algorithms
- Prepare scientific manuscripts for submission to reputable journals based, as needed
- Perform other duties as assigned within the scope of the position
- Provide regular guidance for forecasts by gathering, analysing and validating all data that can be used in preparing COVID decision support forecasts
- Sense-checks forecasts and insights and highlight any unexpected trends;
- Develops rules and methods for prioritizing forecasts based on policy/health priorities
- Works with the Scarsin teams to integrate COVID intelligence into the forecasts.
- Supports Forecast Review processes by preparing and presenting reports to senior management and implementing changes resulting from the forecast review.
- Measures and reports forecast accuracy
- Develops and reaches agreement with stakeholders on appropriate measures of forecast accuracy and forecast bias
- Leads root-cause analysis into major forecast variances
- Reviews past forecasting performance and identifies major forecast variances

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- Identifies and leads the implementation of opportunities to improve forecast accuracy, including collaboration with clients
- Develops repository of information that can be used to support future forecasting and risk analysis
- Performs various other duties as delegated or assigned.

Required Knowledge, Skills, and Experience

The successful incumbent will be

- Master's-level degree in Epidemiology, (Bio)Statistics or related field (at least M.Sc. or equivalent); PhD considered a strong asset
- Direct ODE modelling experience
- 2-4 years' applied modelling experience preferred; domain knowledge in public health and/or infectious disease considered an asset
- Demonstrated expertise in forecasting and strong statistical/predictive modelling skillset (e.g., forecasting, time series modelling, network modelling, Bayesian inference, stochastic modelling, etc.).
- Experience using data science methods for prediction and forecasting (e.g., machine learning, data mining, neural networks, etc.) as well as statistical techniques to mitigate the effects of bias and confounding
- Skilled in python and/or R. Skills in SQL are an asset.
- Experience using data from multiple sources
- Strong oral and written communication skills, with demonstrated experience translating complex results for clients and stakeholders
- Ability to work collaboratively with other team members in a dynamic workplace
- Excellent problem solving skills and able to engage in self-directed learning

Application deadline: June 15, 2021

Send application materials to Ray Martin, CFO (rmartin@scarsin.com)