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CS Capstone

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Capstone – Step 2: The Proposal

Banking and financial services firms rely on a variety of complex numerical and computational models to generate point in time analytics and forecast measures. These tools are often developed in analytical programming languages such as Python, R, Matlab, etc., and are used by the traders, portfolio managers, and risk managers to generate quantitative insights to support their day to day business activities.

The mentor for this project is Arpit Narain ([LinkedIn](#)). “Arpit is the global head of financial solutions at MathWorks. He is responsible for the global expansion of the firm's financial services business in the areas of quantitative modeling and AI / Machine Learning. He has 12 years of experience in the quantitative finance domain working with consulting firms, risk product development firms, and Investment banks. He has led large and complex quant engagements for top investment banks, commercial banks, hedge funds, insurance firms, and other capital market firms in the Americas, Europe, and APAC regions. He also established Quant Risk Modeling & Derivatives Valuations group at KPMG Global Services (India).” The project is part of Crossgamma LLC who he is the founder of. He has a personal relationship with Aman and Mr. Narain has given us this project.

The solution is the implementation of a quantitative finance tool that can do pricing, risk analytics, and portfolio analytics of financial instruments. The tool will be implemented in Python programming language and will use multiple advanced Python packages for analytic purposes. In our mentor’s words, this tool is “a simplified version of the complex quantitative finance tools that big banks use on Wall Street.”