

# Mr. Frank William Domoney

Director at Glencroft Ltd - Virtualisation, Big Data & Cyber Security in the Smart City

Email: francisdomoney@aol.com / Tel: +44 1284 828 802 / Mob: +44 7977 182 063

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**Mr. Frank William Domoney** is a Spark, Big Data and Scala Technology Evangelist promoting the use of these technologies as alternatives to Hadoop and Java where appropriate as researcher and entrepreneur. He worked and still working in many projects combining Virtualisation and Cybersecurity Issues and has a role as a Skill Transfer Engineer specialising in Technology evolution and Economic Development.

After a thirty year career building Fixed, Mobile and Converged Telecommunications Networks for Vodafone, Three and BT in UK, Germany, France, Kosovo, Moscow and Egypt he saw the massive disruption introduced by Big Data and Blockchain in both technology and business and how they enable Smart Cities.

Since then he used to do research studies on NoSQL Databases, Graph Databases and Processing, Cluster Engineering, Stream Processing and Spark deployment and application with University of Essex. His research project is mainly about the "Optimisation of Smart City Infrastructure in Middle Eastern Countries".

Genomics processing is enabled by the ADAM package which is based on Spark, and Parquet. These can cope with many file formats including those standardised by the Global Alliance for Health who are promoting global cooperation and interoperability in genomics.

Processing Clusters for Genomics can be CPUS, GPUs with CUDA, TPUs for Tensor Processing if they can be obtained from Google or Intel's new Xeon Phi chips which support machine learning.

Deep Learning can be applied to Genomics and Frank will be running a Deep Learning workshop that is planned to introduce its application to Genomics and Medical Imagery in October.

Natural Language Processing can be applied to searching for relevant research papers and routing them to appropriate researchers

Oxford and Cambridge and University of California Berkeley all have very substantial Cancer and Genomics research labs. It would be sensible to integrate the Moroccan research with that of these other centres and running research projects as part of the **International Cancer Genome Consortium (ICGC)**

Frank has learned ten languages in his lifetime and still fluent in six. He has a passion for the reconstruction and transformation of North Africa Middle East and their integration in the EU economy. He has a great interest in the history of the Thirty Years War in Europe.