

Personal Information

Name: Michele Vittorio

Nationality: Italian

Date of birth: 25 October 1974

Work experience

5/2018 – present

GIS and Remote Sensing Researcher at the University of New Haven (CT).

- Leading the GIS and Remote Sensing at the Center of Analytics.
- GIS and data analysis for emergency management.
- COVID-19 data acquisition and analysis, including testing, tracing and vaccinations.
- Developed workflows to conduct features extraction from satellite images.
- Projects management and grants applications.
- Developing advanced GIS courses for universities and security colleges abroad.
- Technical support to the development and design of GIS training modules and other learning material – for governments and academic partners.
- Software development with Python and R.
- Development of ETL workflows with FME, Python and Alteryx.
- Dashboards and visual analysis with Tableau.
- Advanced technical advice to staff in the use of ArcGIS software at the advanced level
- Technical recommendations for bids and writing proposals for solutions, services and products.
- Spatial and network analysis.
- Text analysis.
- Teaching GIS and Remote Sensing software, techniques and applications, software development and data analysis with R, Python and SPSS.
- Spatial analysis and development of GIS tools.
- Managing multidisciplinary projects involving GIS and Remote Sensing applications in criminal justice, national security, international cooperation, and environmental sciences.
- Teacher and teacher assistant (Crime analysis, Research and methods, Statistics and quantitative analysis).
- Development of GIS tools to study the Water-Food-Energy nexus in the Middle-East.

2/2015 – 5/2018

Research Fellow III (GIS Team Leader) at KAPSARC (King Abdullah Petroleum Studies and Research Center), Riyadh (Saudi Arabia).

- Promote successful deployment of geographic information system (GIS) technology within the Center.
- Lead in promoting remote sensing utilization KAPSARC. Evaluate and introduce new and advanced remote sensing technologies and data to support the research activity in the organization.
- Provide technical training and support on remote sensing and advice on technical specifications and scope of work for remote sensing projects.
- Create an effective Spatial Data Infrastructure for the Center.
- GIS and Remote Sensing expert of the Remote Sensing & Social Science Applications program.
- Design the GIS system Architecture.
- Facilitate staff meetings and educational work sessions to strengthen staff competencies.
- Communication, including giving internal training courses, dealing with vendors at all stages from pre-sales support onwards, and information exchange.
- Provide technical support within the GIS team.
- Install, configure, test, and train users on custom software.
- Monitor new GIS technologies and trends and propose investments where necessary.

- Promote the GIS section of the quality management system.
- Develop web GIS applications.
- Configure, deploy and manage Voyager Search.
- Line management for GIS technical and GIS analyst staff, including training and mentoring.
- GIS resources management and allocation.
- Organizing and participating to international conferences and workshops on GIS, Remote Sensing and Social Science Applications.

6/2013 – 1/2015

GIS manager at Faroe Petroleum, Stavanger (Norway).

Duties and responsibilities

- Responsibility for Faroe's geoscience information systems.
- Management of the Oracle, SQL Server and PostgreSQL databases.
- Manage and support the GIS team and the ArcGIS users.
- Maintain and support the GIS database (ArcGIS for Server and GIS data).
- Project manager.
- Planning and preparations for survey projects.
- Quality control of data and procedures.
- Managing the Petrel master project for the Petrel users.
- Planning and administration of the migration to Petrel studio manager.
- Seismic 2D & 3D data management in for ArcGIS, Kingdom, Petrel.
- Management of Seismic data release and trades.
- Seismic entitlements management.
- Well data management in Openworks, Kingdom, ArcSDE, Petrel and GeoX.
- Create and manage the tools that enable a seamless flow of information between Petrel, GeoX, ArcGIS and the corporate database.
- Management of wells, seismic and cultural GIS layers.
- Develop the FME and Python tools to update and QC the Esri ArcSDE corporate database.
- Make sure that all information is available at all times through databases and GIS systems.
- Project manager for the development of the Faroe Petroleum FactPages.
- Project manager of the intranet SharePoint system.
- Suggest and implement developments and improvements to the overall geoscience information systems.
- Ensure that databases are maintained and QC'd.
- Actively cooperate with the Exploration, BD and Asset teams as appropriate to ensure free exchange of information, knowledge and resources in a proactive manner.
- Responsible for scouting and business intelligence and for making sure information is transferred to the organisation.
- Support Exploration Manager, BD Manager and New Ventures Manager in project management. Help ensure information and knowledge gained in projects are kept and made available for future use.
- Make strategic plans for the geoscience information systems.
- Develop procedures and best practices.
- Responsible for geoscience software applications inventory.
- Provide technical support to staff when required.
- Coordinate the company's trading activities.
- Coordinate data and software issues with the IT Manager.
- Responsible for scientific papers library.
- Contribute to other Data Management related tasks as appropriate.
- Liaise with colleagues and contractors on technical requirements and data deliverables.

2/2012 – 6/2013

GIS Team Leader at Kadme (Information Management software and solutions for the oil and gas industry), Professor Olav Hanssens vei 9, 4021 Stavanger.

Duties and responsibilities

- Lead GIS projects, actively contribute to develop the relevant competence area and assure good quality and best practice across the GIS projects delivered.
- Business development.
- Manage solutions implementations and clients engagement.
- Act as principle liaison to other organizations on GIS related projects and activities.
- Technical leader of the GIS resources to ensure use of acceptable and approved standards, tools, technology and working methods. Contribute to the design and development of the mapping software components developed by the company.
- Implement and maintain E&P data management methodology, policies, QA procedures, best practices and services.
- Participate in the design, analysis and documentation for client proposals.
- Provide technical analysis and design for GIS databases and systems implementation.
- Oversee the GIS team and manage client interactions and expectations.
- Liaise with the software development teams to help translate user requirements into software specifications.
- Develop GIS software based on ESRI platform for desktop (ArcGIS for Desktop) and Web applications (ArcGIS for Server).
- Develop automation tools for loading spatial data using data modelling and attribute mapping.
- Budget and resource planning.
- Provide senior GIS consultancy services both internally and for contractors.
- Develop GIS technologies and techniques.
- Provide expertise with tools for data migrations, including the use of the Data Interoperability extension and FME.
- Provide documentation for workflow routines and the quality assessment.
- Monitor and maintain ArcSDE and tuning.
- Manage and monitor geodatabase replication.
- GIS projects management.
- Software programming and Internet website creation.
- Providing GIS support and developing of standalone applications.
- Design and integration of software systems, in particular end-to-end applications relevant to oil and gas industry.
- Creation of tools and procedures to enable data interoperability in E&P software (ArcGIS, Petrel, OpenWorks, L2S, Petrobank).
- Maintaining and operating a wide range of user applications based on oil and gas data.

2009 - 2012

Lead GIS analyst at ABPmer (Environmental consultancy), Suite B Waterside House, Town Quay, Southampton, Hampshire (UK).

Duties and responsibilities

- Provide technical support within the ABP group.
- Monitor new GIS technologies and trends and propose investments where necessary for the company.
- Propose and managing the GIS procedures for the ABPmer quality system.
- Technical leader and adviser on remote sensing technology and applications, responsible for strategic planning for remote sensing applications.
- Development and administration of multiuser ArcSDE geodatabase models.
- Managing data and metadata.
- Develop decision support system tools, such as web GIS applications.
- Maintain database connections and geodatabases.
- Update existing ArcSDE geodatabase.
- Provide assistance to maintain compliance with several data model.
- Installation/Maintenance/Implementation (ArcSDE/Oracle/SQL Server)
- Assist colleagues and clients with the use of GIS software, including GIS Web applications.

- Ensure a high quality of all spatial data and procedures relevant to the company's activities.
- Responsible for the daily GIS work and data and staff management.
- Data analysis and presentation, geodatabase maintenance and planning and development of GIS projects.
- Software development (.NET with ArcObjects, Python, VBA and ArcPy for ESRI ArcGIS 9.2, 9.3 and 10, Model builder).
- WebGIS development (ArcGIS server, Geoportal, ArcGIS API for Flex and Silverlight).
- Editing and incorporating data collected by GPS.
- Using map topology for spatial data editing.
- Designing GIS databases applications.
- Creation of figures and reports.
- Develops and maintains GIS layers/data element.
- Evaluating the accuracy and the quality of existing and new data.
- Perform spatial analysis to resolve complex GIS mapping problems and develop solutions.
- Review software specifications.
- Trouble-shoots and maintains GIS systems.
- Internal and external training on GIS resources.
- Write user manuals, training materials and deliver training.

2005 - 2009

Founder and GIS manager / GIS developer at Mappamondo GIS (GIS consultancy)

Duties and responsibilities

- GIS manager for international projects.
- Responsible of the marketing and the business development.
- GIS software developer.
- Responsible of the GIS training.
- Design and integration of GIS systems.
- GIS Software programming.
- Providing GIS support and developing of GIS applications

2002 - 2005

GIS Data manager at Emilia Romagna Region - Parma Province, Bologna and Parma (Government)

- GIS analysis, maps productions, Web gis systems and database management.

2000 - 2002

GIS project manager at Emaco and EIC, Tripoli (Libya)

- GIS Project management for international projects related to oil and gas data.

1997 - 2000

GIS technician at the Environmental Protection Agency, Parma (Italy)

- Software development, Maps production, GIS training, Data analysis.

Education and Training

- **MSc (equiv.) Environmental Sciences** (Università di Parma, Italy, 1999).
- Currently pursuing a PhD in Criminal Justice at the University of New Haven.
- **Geographic Information Systems Professional (GISP)** (GIS certification institute, 2012, 2016, 2020).

Languages

- Italian: Mother tongue
- English: Good

- German: Basic
- Arabic: Basic

Technical skills

- Management of projects involving the use of geographic data and the development of GIS software.
- Data analytics: statistical model selection, supervised/un-supervised/deep machine learning, network analysis, and natural language processing (NLP).
- GIS software (ArcGIS, QGIS, PostGIS).
- Visualization platform such as Tableau, Power BI and Omniscope.
- Data analysis and presentation, geodatabase maintenance, planning and development of GIS projects.
- GIS software development.
- Satellite images registration, enhancement, classification and analysis.
- GIS software instructor.
- ERDAS Imagine, ENVI, ER Mapper for image analysis, SPSS, R.
- Geospatial Data Abstraction Library (GDAL).

Publications

- Riolo F., Vittorio M. (2010). *Manuale avanzato di ArcGIS 9 e 10 - Creare e gestire modelli GIS con il Model Builder*. Dario Flaccovio Publishing. ISBN 978-88-579-0028-5.
- Fenner, D., Riolo, F., & Vittorio, M. (2010). A survey of the corals within diving depths of Capo Rizzuto Marine Protected Area, Calabria, southern Italy, 2008. Mappamondo GIS, Italy.
- Mabrey, D., & Vittorio, M. (2018). Moving From Theory to Practice in the Water-Energy-Food Nexus: An Evaluation of Existing Models and Frameworks. *Water-Energy Nexus*.
- Lopez-Ruiz, H. G., Blazquez, J., & Vittorio, M. (2020). Assessing residential solar rooftop potential in Saudi Arabia using nighttime satellite images: A study for the city of Riyadh. *Energy Policy*, 140, 111399.
- Hill, D., Rasmussen, C., Vittorio, M., & Myers, D. (2020). Red-flagging the leagues: the US Sports most in danger from match-fixing. *Sport in Society*, 1-19.
- Vittorio, M. (2020). A Decision Support Tool for the Assessment of Water–Energy–Food Nexus in Saudi Arabia. In *Food-Energy-Water Nexus Resilience and Sustainable Development* (pp. 57-73). Springer, Cham.

Hobby

- Marathons, Volleyball.
- PADI Diving Instructor.