

IVAN EFREN RAMISCAL

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PROFILE

Ivan Efren Ramiscal is a results-driven solutions architect and engineer with expertise in designing and deploying software systems. With a strong background in big data geo-data visualizations and location data, Ivan has provided technical guidance to government partners and Fortune 500 companies, playing a key role in improving geospatial software implementations. His accomplishments include developing innovative data visualization platforms, leading teams, and receiving recognition for his technical expertise and social competency.

Software Architecture and System Design Ivan has demonstrated expertise in designing, developing, and deploying software systems, providing expert technical guidance to government partners, sponsors and Fortune 500 companies in this domain.

Geospatial Data Visualization Ivan specializes in big data geo-data visualizations and location data. He has contributed to projects involving geospatial software implementations, tools, dashboards, and processes.

Web Application Development and Data Visualization Ivan has a strong background in developing web applications. He has designed and deployed innovative data visualization platforms and tools, leveraging technologies such as JavaScript, Swift, Mapbox, and Superset.

Leadership and Mentoring Ivan has held leadership positions and successfully led development teams. He has mentored interns and guided their growth, fostering relationships with external organizations.

Technical Advisory and Communication Ivan has served as a trusted technical advisor to various companies, providing guidance on system architecture and design challenges. He has excellent communication skills and can effectively represent organizations to external stakeholders and government officials.

EXPERIENCE

Lead Software Systems Engineer, MITRE, McLean, VA Apr 2021 - Present

- Provided expert assistance and guidance to projects such as FCC Connect2Health, Green Energy Pathways, and AFRICOM SETAF/AF, resulting in significant improvements to their geospatial software implementations, tools, dashboards, and processes.
- Contributed to the elevation of MITRE's contributions to various sponsors in cutting-edge geospatial web application development.
- Designed, developed, and deployed the DV8 data visualization platform, including the creation of innovative data visualizations using WebGL via D3FC.
- Received recognition for contributions to the FAIR Framework for the Social Justice Platform, exceeding expectations and receiving praise for technical expertise and social competency.

- Mentored interns in the development of the Green Energy Pathways dashboard, fostering relationships with external organizations and receiving a Spark award for support to the project.
- Provided leadership and guidance as the Engineering Lead of the Development Team for the NTD project, implementing improvements, establishing new teams, and enhancing collaboration and productivity.
- Received an award from the L534 Chief Engineer for providing actionable guidance and expertise in modern geospatial technologies to various projects as the department Geospatial Tech Advisor.

HIGHLIGHTS

- Successfully completed an Executive MBA program, enhancing leadership and business skills. Completed courses in business, accounting, markets, economics, data analysis, operations management, and blockchain specialization.
- Demonstrated significant impact across multiple projects, leveraging technical expertise, communication skills, and leadership abilities.
- Proven track record of delivering high-quality software solutions and improving development processes.
- Recognized for expertise in geospatial web application development and data visualization.
- Successfully guided and mentored interns, fostering their growth and development.
- Played a crucial role in the optimization and improvement of the NTD project, receiving praise for recommendations and implementation of new processes.
- Received various awards for exceptional performance and contributions to projects.

SELECTED

- As the lead developer for the Innovation Toolkit (ITK) project **ITKApp** <http://itkapp.mitre.org/>, guided the team's technical approach, drove the implementation of CI/CD, and helped secure additional funding through technical and white papers.
- Developed and designed the **Hedonometer** <http://hedonometer.org> project, a website and data visualization tool for daily Twitter sentiment detection using D3, Ruby, and AWS.
- Led the team to design, develop, and deploy the **Green Energy Dashboard**, <http://greenenergy.mitre.org> a cutting-edge geospatial analysis tool that gained partnerships with National Renewable Energy Laboratory (NREL), Arlington County, Virginia, and Penn State.
- Integrated interactive models for the **Social Justice Platform**, contributing to the team receiving a Catalyst Award.

Solutions Architect, Mapbox, Washington, DC Mar 2019 - Nov 2020

- Provided expert technical guidance to Fortune 500 companies on system architecture and design challenges related to big data geo-data visualizations and location data.
- Served as a trusted technical advisor to companies such as NBCUniversal, Ford, GM, SwissRe, GuyCarpenter, Moody's, and PSEG.
- Led the development of proof-of-concept prototypes, conducted in-depth system architecture and design reviews.
- Hands-on experience developing software projects with JavaScript, Node.js, Ruby, and Swift.

Lead Software Systems Engineer, MITRE, McLean, VA Oct 2010 - Mar 2019

- Led software engineering efforts in the **Software Solutions and Technologies** department.
- Developed and designed the Hedonometer project, a website and data visualization tool for daily Twitter sentiment detection using D3, Ruby, and AWS.
- Ported MatLAB algorithm to C and implemented it in an iOS iPad app for the Mild Traumatic Brain Injury MITRE Innovation Project.
- Led the development of an illustration-centric data visualization toolkit and a continuous immersive systems engineering project.
- Developed an anonymous sentiment elicitation survey system, an iPad app used by the US Census in the 2020 Census Field Infrastructure Session.

Senior Technical Advisor, MITRE McLean, VA 2016-2019

- Developed and implemented a mentoring strategy to improve departmental communication, collaboration, and knowledge sharing.
- Built collaboration and management tools to enhance communication between management and staff.
- Established weekly Software Hangouts and Lightning Talks for knowledge sharing and team building.

Software Engineer Team Lead, SRA International, Fairfax, VA 2004-2010

- Led the Web/Portal team in the development and management of web applications and tools for the Department of Justice, Office of Justice Programs.
- Developed programs using XML, XSLT, XPATH, and XPointer.
- Analyzed XML data and implemented XSLT stylesheets to extract specific data for building websites.

Systems Analyst, Schafer Corporation, Arlington, VA 2001-2004

- Conducted detailed analysis and systems design for software system simulations.
- Developed a C4ISR information architecture tool for the Joint Theatre Air and Missile Defense Organization JTAMDO

Software Engineer, WorldWeb.net, Alexandria, VA 1999-2001

- Built import/export tools between QuarkXPress and the ExpressRoom Content Management System.

Software Developer, WJSA, Arlington, VA 1996-1999

- Conducted detailed analysis and systems design for software system simulations.
- Developed a C4ISR information architecture tool using Java, XML, XSLT, and SVG for the Joint Theatre Air and Missile Defense Organization.
- Worked on the Information Architecture Dynamic Model development team for the National Missile Defense Lead System Integrator.
- Constructed a 3-D model of the Space Based Laser constellation of satellites using VRML, CosmoPlayer, VRMLScript, and HTML.

EDUCATION

Ivan holds a Bachelor of Science in Pure Science from the University of St Andrews. He further expanded his knowledge and skills by completing an Executive Master of Business Administration from the Quantic School of Business and Technology. Additionally, Ivan obtained a Certificate of Digital Art from the

Corcoran College of Art + Design, showcasing his multidisciplinary approach to learning.

Bachelor of Science, Pure Science
University of St Andrews, Scotland

Executive Master of Business Administration, July 2022
Quantic School of Business and Technology

Certificate of Digital Art
Corcoran College of Art + Design

TEACHING

Johns Hopkins Applied Physics Laboratory

- Exploring Data: Visualization

MITRE Institute

- Data Visualization as a Deployable Service with Ruby & D3
- Data Visualization for Complex Systems

RECOGNITION

MITRE Director's Award

- Bringing Real World STEM

SRA Employee of the Month

- CFGO

PORTFOLIO

Ivan Ramiscal Portfolio

- Example Work <http://ivanr.com>

Devised solution to create broadcast quality map animations for a Big Three television network in the US. This solution enables the creation of map animations for breaking news in minutes.

- Clustered data: <https://vimeo.com/435368351>
- Broadway 3D Buildings: <https://vimeo.com/454526671>
- Grand Canyon: <https://vimeo.com/435368452>

Designed an Obstacle Avoidance Algorithm solution

- Designed and developed client-side obstacle detection and route avoidance.
- Documentation: <https://bit.ly/3W6K0hv>

Developed a COVID Movement Story

- Built COVID story with Mapbox Movement.
- Link: <https://vizla.s3.us-east-1.amazonaws.com/movement/index.html>

Developed a Feature Extraction Story

- Built Feature Extraction Story with Mapbox Imagery.
- Link: <https://vizla.s3.us-east-1.amazonaws.com/imagery/index.html>

Built Location Intelligence Dashboards

- Designed and developed highly performant large-scale location intelligence dashboards with turn-by-turn navigation, geolocation, and satellite image cards.
- Developed an emergency dashboard prototype and a border wait times dashboard prototype.

Devised Store Locator Concepts

- Tightly integrated and responsive updating of the information panel when zooming and panning through the map.

A Best Buy Store Locator

- Link: <https://ivaner.pythonanywhere.com/bestbuy>

A Red Roof Inn Store Locator

- Link: <https://ivaner.pythonanywhere.com/redroof>

TAKEAWAYS

- Proficient in data visualization, web application development, and leveraging web technologies.
- Demonstrated strong leadership skills by leading teams, coordinating projects, and instituting effective development methodologies like daily standups and sprints.
- Proven ability to extract project requirements, design impactful solutions, and deliver compelling web applications.
- Effective communicator, both within the team and in representing MITRE to external stakeholders and government officials.
- Committed to continuous learning and personal growth, evident in pursuing an Executive MBA and completing relevant business courses.