

JEN KIM (김상미)

CONTACT

- +1-484-818-2502
- jen.sangmi.kim@gmail.com
- heyjenkim.com
- Philadelphia, PA | open to relocate

SKILLS

Python, Julia, MatLAB, SQL, VBA, HTML

ArcGIS, Tableau, PowerBI

Microstation, AutoCAD, Canva

Jira, Trello, Notion

LANGUAGES

English	◆	◆	◆	◆	◆
Spanish	◆	◆	◆	◆	◆
Korean	◆	◆	◆	◆	◆
French	◆	◆	◆	◆	◆

ORGANIZATIONS

- American Society of Civil Engineers (ASCE)
- Young Professionals in Infrastructure (YPI)
- Vice President of Diversity (2020-2022)
 - Launched "Diverse Paths to Leadership Mentorship Program"
 - Launched "Building the Future Diversity Grant"
 - Diversity, Inclusion & Workforce Committee Chair (2018-2020)
 - Spearheaded "Coffee Chats," networking opportunities with diverse leaders in infrastructure industry

PROFILE

Systems-minded engineer with 10+ years of experience working in various roles and international locations. Skilled in operations, business development, cost modeling, project management, reporting analytics, and strategic innovation.

Strong track record of delivering results and creatively solving complex problems in diverse settings, using a data-driven, place-based approach to manage projects from ideation to implementation. Advocate for justice, equity, diversity & inclusion (JEDI) in personal and professional communities.

WORK EXPERIENCE

Entrepreneur

Demium | Barcelona, Spain

Apr 2022-Sep 2022

- Winner of Build & Pitch competition, selected to Demium International Talent Investor's Startup Incubator.
- Conceptualized and developed a business idea in the video streaming industry, conducting market research and analyses for concept validation, and creating decks and pitching to a variety of audiences.
- Participated in workshops and training sessions on topics such as financial planning, product development, and marketing.

Research Associate

Aretian Urban Analytics & Design | Barcelona, Spain

Jan 2022-Jun 2022

- Conducted research quantifying relationships between select socioeconomic, political, and geographical indicators and urban performance.
- Constructed a database incorporating over 10 million pieces of data including time, geography, and census data, through multi-sourcing and data wrangling techniques in Python and ArcGIS.
- Utilized Tableau to generate interactive data visualizations and identify key spatiotemporal trends.

Lead Operations Engineer

Cintra US | Austin, TX

2019-2020

- Oversaw technical services for a \$9.1B+ portfolio of highway infrastructure assets, developed business cases for new public-private partnership (P3) projects, and spearheaded corporate innovation projects.
- Designed and standardized automated workflows with Data Analytics and IT departments to increase reporting efficiency from regional offices.
- Revamped 5-year business plans to incorporate technology infrastructure changes and optimize costs.
- Created cost models evaluating technical and financial life cycle asset management feasibility for business development proposals.
- Led physical and digital innovation projects, negotiating partnerships and managing cross-functional, international teams and providers including OEMs, systems integrators, and startups.

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EDUCATION

Heriot-Watt University University of the Basque Country University of Mons

MSc, Smart Cities and Communities
(Erasmus Mundus Joint Master's Degree)
MSc, Mechanical Engineering, Energy
Engineering Specialization
2020-2022

Summa cum laude

- Smart Grids and Demand Management
- Energy Efficiency in Buildings
- Sustainable Urban Planning, Energy and Transport
- Capstone Thesis: "Spatiotemporal Framework for Assessing Urban Performance for Smart Cities"

Princeton University

BSE, Civil & Environmental Engineering
Minor in Values & Public Life
Cum laude

United World College - USA

International Baccalaureate Diploma

AWARDS & ACHIEVEMENTS

Published in academic conference proceedings: "A Multi-Lens Approach to Smart City Planning: Philadelphia" (2022)

Played for Team Colombia in International Worlds' Ultimate Frisbee Tournament, Masters' Division (WFDF WMUCC 2022)

Global Employee of the Year Finalist (2019)

OTHER INTERESTS

Ultimate frisbee

Hiking

Zero-waste cooking

Mentoring early-stage startup founders

WORK EXPERIENCE

Senior Operations & Maintenance Engineer

Cintra US - NTE Mobility Partners, LLC | North Richland Hills, TX 2018-2019

- Oversaw O&M over all roads, bridges, and buildings on 1000+ lane-miles of roadway projects in the North Texas region (LBJ, NTE, NTE35W TEXpress).
- Led analyses for cost-benefit studies, asset conditions, budgets, cost models, forecasts, and key performance indicators for C-level directors.
- Managed facility asset management systems integrating multiple information management software for monitoring, updating, and reporting.
- Designed dataflow pipelines with systems team to import operations data into Access and PowerBI, streamlining reporting procedures.
- Mentored 4 junior engineers and interns on O&M team.

Operations & Maintenance Engineer

Cintra US - NTE Mobility Partners, LLC | North Richland Hills, TX 2015-2018

- Digitalized roadway facility assets from design files (CAD and DGN) into geodatabases using GIS for asset management systems.
- Created analyses, reports, and presentations on all operations-related activities like asset conditions, budget comparisons, key performance indicators, and operational improvement initiatives.
- Managed capital and operational projects improving corridor safety, increasing throughput (and toll revenues), and satisfying contractual requirements.
- Led transition of roadway maintenance department from paper to electronic mobile platforms, reducing paper consumption by 40% and paperwork hours by 20%. Managed project lifecycle from proposal to execution.

Technical Analyst

Cintra | Austin, TX & Madrid, Spain 2014-2015

- Designed CAPEX and OPEX payment availability and risk analysis models using @Risk and Excel VBA, including for D4R7: Slovakia highway project proposal (€1.3bn, 2017 European PPP Deal of the Year).
- Created analyses and reports in Spanish and English on project feasibility, performance benchmarking, asset conditions, and budget comparisons.
- Analyzed large databases of traffic, revenue, and operations data for portfolio assets using Tableau, PowerPivot, and in-house asset management systems.

Impact Investment Research Associate

Fundación Progreso | Cochabamba, Bolivia Jun 2013- Aug 2013

- Worked directly with CEO of impact investment fund analyzing sociopolitical issues and investment opportunities serving the Bottom of Pyramid in Bolivia.
- Conducted interviews and collected data in Spanish and English from various stakeholders regarding water quality and distribution in Cochabamba.
- Synthesized findings with cost/benefit analysis and recommendations.