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# JAMES CARNEY

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## ◆ EDUCATION

MS, DEVELOPMENT FOR GIS AND CARTOGRAPHY

UNIVERSITY OF WISCONSIN-MADISON (2017-2019)

- Full-stack, responsive development, UI/UX design, and geospatial analysis and data visualization.
- 4.0/4.0 GPA
- 2019 Winner, Program Geovisualization Competition ([↗](#))
- Project Portfolio ([↗](#))

MBA, FINANCE CONCENTRATION

CSU STANISLAUS, TURLOCK (ONGOING)

BA, ENVIRONMENTAL ECONOMICS

UNIVERSITY OF WASHINGTON, SEATTLE (2008)

## ◆ EXPERIENCE

TETRA TECH – WATER RESOURCES ECONOMIST

SEATTLE & SAN FRANCISCO (2008 – PRESENT)

- **Risk Analyst.** Probabilistic natural hazard consequence modeling. Integrating economic and engineering data to perform risk-based benefit-cost evaluations for municipal, state, and federal clients. Consideration of all potential economic consequences, including asset loss, direct/secondary regional effects, and ecosystem goods and services.
- **GIS Analyst.** Design and implement project databases and spatial analysis workflows to gather and organize economic and engineering information necessary for consequence modeling and map production.
- **Business Analyst.** Support internal project financial analyses. Developed custom Excel tools to forecast labor utilization and support inter-office load leveling. Developed and maintain Excel tools and dashboards for automating generation of regular internal financial reports.
- **Environmental Planner.** Perform analyses and author reports as required for NEPA and CEQA planning studies, with expertise in Socioeconomic, Environmental Justice, and Recreation resource categories. Perform analyses and related technical documentation for Federal grant program applications such as FEMA HMA and DOT INFRA.
- **Project Manager.** Manage small to medium sized project for Federal clients (incl. Fixed Price and Time & Materials). Manage subcontractors, review work products, facilitate internal quality assurance processes.

## ◆ SKILLS & TOOLS

BUSINESS ANALYTICS

- ◆◆◆◆ Excel, including VBA
- ◆◆◆◆ Access, PowerBI, Tableau, R

FULL-STACK WEB APP DEVELOPMENT

- ◆◆◆◆ **Frontend:** JavaScript, HTML/CSS, jQuery, React, Gatsby, Apollo, Java
- ◆◆◆◆ **Backend:** Node.js, SQL, Python, Heroku (incl. Postgres), Netlify, GraphQL.

ECONOMIC MODELING AND RISK ANALYSIS

- ◆◆◆◆ **Models:** FEMA (BCA, HAZUS); USACE (FDA, and more). MIG IMPLAN. Excel and GIS.

GIS & CARTOGRAPHIC DEVELOPMENT

- ◆◆◆◆ **Geospatial Analysis:** Python, GDAL/OGR, ArcPy, SQL, geodatabases, Postgres (PostGIS)
  - ◆◆◆◆ **Libraries:** MapBoxGL, Leaflet, Turf.js, ESRI JS API, D3, Deck.gl
  - ◆◆◆◆ **Creative Tools:** Illustrator, Photoshop
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## ◆ INTERESTS

Camping, backpacking, horror movies, woodworking, beer, fishing, learning a new skill.