MICHAEL GOFF
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Skills and Projects

Javascript
- Node.js, React, client-side JavaScript, PostgresQL, MongoDB
- Full stack development illustrated in a bug tracker (backend and frontend).

Python Data Science Ecosystem: TensorFlow, Keras, scikit-learn, NumPy, Pandas, Matplotlib
Machine Learning: Practical application and theory of machine learning algorithms
- Deep Learning: tensorflow-based face mask classification system
- Reinforcement Learning: game playing with Q learning and deep Q learning
- Genetic Algorithms: random map generator using genetic algorithms and cellular automata

Cloud Services: Deployment of node.js apps on AWS, Digital Ocean
Game Design
- Axion: a role playing game built in JavaScript and WebGL.
- Repair the Cosmos: an incremental civilization builder game built in React.

Web Development: HTML, CSS
Research Skills:
- Ability to quickly familiarize myself with new topics
- Ability to synthesize data from a range of disciplines

Work Experience

Urban Cruise Ship: Cofounder, December 2014 to September 2016 and October 2018 to present
- Building a research consultancy and think tank on energy systems
- Managing a full time graphic designer and researcher
- Conducting research and data analysis in Python
- Focus areas include energy, natural resources, habitat, and cities
- Full cost of solid waste disposal for Davidson County, TN, for Tennessee Environmental Council
- Developing internal tools for efficient workflow
- Built a custom node.js web app to present research at http://urbancruiseship.org

The Breakthrough Institute: Energy Analyst, October 2016 to September 2018
- Drafted *Quantifying and Reversing the Bay Area Housing Shortage*
- Research projects on energy usage in world agriculture; drivers of decarbonization
- Conducted analysis of world energy systems in Python and R

Vanderbilt University: Assistant Professor, August 2011 to May 2014
- Taught Calculus, Graph Theory, and Number Theory
- All duties of teaching, including planning lectures, office hours, and computing grades
- Nine research publications in graph theory and combinatorics

Education

University of Washington:
- Ph. D.: Mathematics, 2010. Adviser: Isabella Novik

Gonzaga University
- B. S.: Mathematics, 2004, minors in Computer Science and History