Bennett Dell Norman

EDUCATION:

M.Eng Computer Science @ Cornell Tech — August 18' – May 19'
B.S. Computer Science (Music Minor) @ Cornell University — August 14' – May 18'

TECHNICAL SKILLS: Python • Pandas • scikit-learn • Docker • postgis • Geospatial python • PyTorch • streamlit • QGIS

EMPLOYMENT:

- **Data Scientist | Envelope** — July 19' – Present
Envelope combines predictive analytics with the most accurate 3D modeling of zoning laws to identify land acquisition opportunities. I create models to value buildings, understand ownership networks, and analyze market changes.

- **Data Engineer | Department Of City Planning NYC** — June 19' – August 19'
Worked on the ETL of NYC public datasets including the city's parcel, facility and environmental review datasets. I also volunteered at planning community hearings.

- **Research Associate | Jenny Sabin Design Lab** — June 16' – June 18'
Worked on a software project called RoboSense that enables architects to easily design and use intelligent Arduino controlled end effectors for 6 axis robots in Grasshopper and Rhino. Co-authored two papers that were accepted to SimAUD 2016 and Acadia 2018.

- **Machine Learning Engineer | Autodesk** — June 17' – August 17'
Implemented a variational autoencoder to encode Generative Design shapes as vector representations to calculate similarity and cluster 3D generated models. Utilized traditional computer vision techniques for shape vector representation. Researched a 3D model recommendation system.

PUBLICATIONS:

- **Robosense 2.0: Robotic Sensing and Architectural Ceramic Fabrication | Acadia 2018** — October 18'
Presented the paper in Mexico City and received a Student scholarship award.

- **Matrix Architecture: 3D-Printed and Simulated Kirigami Matrices & Auxetic Materials | SimAUD 2017** — May 17'

PROJECTS:

- **NYC Affordable Opportunity** — August 20' – Present
A project analyzing the distribution of new affordable units in areas of opportunity in NYC. Only a quarter of new affordable units built since 2014 in NYC are in moderate to very high economic opportunity tracts.

- **Image Captioning Machine Learning Research | Cornell University** — August 17' – May 18'
I worked on a research project to improve image captioning by implementing a loss function that computers semantic similarity between captions using Word Movers Distance. We were advised by Professor Kilian Weinberger.

Other Things:

Housing Data Coalition, Climbing, Music (Saxophone, Keyboard, Guitar), Making Things. **Recent Books:** The Ministry For the Future, Rewiring America, The Color of Law

COURSES: Advanced Topics in Machine Learning • Machine Learning for Intelligent Systems • Machine Learning for Data Science • Computer Vision • Analysis of Algorithms • Functional Programming • Discrete Mathematics • Data-Driven Web Applications

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