Laura Landon

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EDUCATION

Massachusetts Institute of Technology Sep 2023-Present
PhD student in Electrical Engineering and Computer Science Boston, MA

- Network Coding and Reliable Communications Group under Dr. Muriel Medard
- Research focus: Network coding as an alternative to ARQ and HARQ in 5G cellular
- Classes: Computer Networks, Advances in Computer Vision, Fundamentals of Probability

Brigham Young University Sep 2018-Aug 2023
B.S. in Electrical Engineering, with minors in Computer Science, Mathematics Provo, UT

- Classes: Digital Communication, Digital Signal Processing, Computer Networks, Design of Control Systems, Embedded Systems, Real Analysis, Data Structures

SKILLS

Programming Languages: Python, C/C++, MATLAB, Javascript, HTML/CSS
Software Tools: PyTorch, Linux/Unix OS, GNU Radio, Wireshark
Languages: English (native), German (conversational), Russian (conversational)

EXPERIENCE

JMA Wireless Jun 2024-Aug 2024
Intern Boulder, CO

- Furthered the MIT NCRC group's collaboration with JMA on testing an implementation of network coding in an industry 5G cellular system, including a conference paper in 6GNet (*Enhancing 5G Performance: Reducing Service Time and Research Directions for 6G Standards*)

Technical University of Berlin May 2023-Aug 2023
Visiting Research Student Berlin, Germany

- Designed and tested a hierarchical modulation method for LoRa modulation to increase data rate by 30% for low SNR and 120% for high SNR by multiplexing signals of different spreading factors.

Rincon Research Corporation Jun 2022-Jul 2022
Intern Tucson, AZ

- Designed and implemented an experimental indoor geolocation system using machine learning as part of a team of interns

PROJECTS

Study of delay and network probing tradeoffs for real-time video

- Designed a simplified system to study the delay and bandwidth estimation effects of rearranging and padding video traffic sent over a socket using Google's BBR congestion control (class project, Fall '24)

Audio-visual neural network project

- Replicated existing work training a neural net to predict audio from "drumstick hitting objects" videos and tested against an expanded dataset to evaluate generalizability (class project, Spring '24)

Automatic ground antenna steering for satellite communication

- Designed and built a control system to automatically point an outdoor 3.7m dish antenna to within 1 degree of a desired location in the sky for under $10,000 (team capstone project, 2022-2023)