COLTEN WOOD DILANNI

508-507-1881 | cwdiianni@gmail.com | colediianni.github.io/coltendiianni/

EDUCATION

University of Wisconsin - Madison   **Madison, WI**
Machine Learning, MS/PhD, GPA: 3.75   *Sept 2021-Cur.*
- **Programming Coursework:** Machine Learning, Matrix Methods in Machine Learning

Carleton College   **Northfield, MN**
Computer Science, BA, GPA: 3.82   *Sept 2017-June 2021*
- **Programming Coursework:** Machine Learning, Data Science, Algorithms, Linear Algebra, Numerical Analysis, Programming Languages Design & Implementation, Computability & Complexity, Software Design

EMPLOYMENT

University of Wisconsin - Madison   **Madison, WI**
Computer Science Researcher   *Sept 2021-Cur.*
- Performed membership inference attacks on convolutional neural networks to reconstruct the models' training set using a generative adversarial network
- Organized data processing and analysis pipelines, allowing attack to transfer for various datasets and model architectures
- *Advisor*: Dr. Somesh Jha

Carleton College   **Northfield, MN**
Computer Science Researcher   *Jun 2019-Jun 2021*
- Conducted exploratory research investigating the effects of menstrual cycle hormones on insulin sensitivity in individuals with type I diabetes by analyzing blood glucose and insulin time series data
- Accounted for variable schedules by utilizing dynamic time warping while performing clustering in order to identify average day series for each individual
- *Advisor*: Dr. Dave Musicant

Ottawa Hospital Research Institute   **Ottawa, ON**
Computer Science Researcher   *Jun 2020-Aug 2020*
- Predicted localized gene expression within tissue samples by training a convolutional neural network on H&E slide images and testing against spatial transcriptomics data
- Achieved a maximum percentage variance explained of 20.57 when predicting expression of the 10 most highly expressed genes in a mouse main olfactory bulb dataset
- *Advisor*: Dr. Theodore Perkins

Prep Network   **Maple Grove, MN**
Data Analyst   *Dec 2019-Jan 2020*
- Built a gate revenue prediction model using attending teams' proximity to various tournaments
- Calculated optimal day, time, and subject of company Twitter and email advertisement

TEACHING ASSISTANT

University of Wisconsin - Madison   **Madison, WI**
Programming I   *Sept 2021-Cur.*

Carleton College   **Northfield, MN**
Programming Languages Design & Implementation   *Sept 2020-Mar 2021*

Carleton College Summer Computer Science Institute   **Northfield, MN**
Natural Language Processing   *Jun 2019-Sept 2019*

PROJECTS

Senior Capstone Project
Distinguished Engineer   *Sept 2020-Mar 2021*
- Designed a two factor authentication method using a recurrent neural network on keystroke dynamics
- Achieved a true-user acceptance rate of 95% with a false-user acceptance rate of only 22%

LEADERSHIP

Carleton Student Association   **Northfield, MN**
Class Representative   *Mar 2018-Mar 2021*
- Established a seminar series covering topics such as budgeting, investing, health insurance, and job benefits to prepare students for life after graduation

SKILLS

Software Languages: (proficient): Python, Java, C, R (familiar): SQL, HTML, CSS, LaTeX