github.com/cunov **Colton Cunov** coltoncunov@gmail.com

EDUCATION

Chalmers University of Technology, Gothenburg, Sweden Aug 2020 – June 2022
M.Sc. Complex Adaptive Systems – Data Science track
Full-tuition Scholarship via *US Friends of Chalmers*

Texas A&M University, College Station, TX Dec 2017
B.S. Industrial Engineering *(magna cum laude)*
Major GPA: 3.87 Cumulative GPA: 3.77
Nominated as Finalist for *Most Outstanding Departmental Senior* (top 5 graduates)

INDUSTRY EXPERIENCE

Apple Inc. via **Wipro Ltd.** – San Jose, CA
Site Reliability Engineer Sep 2018 – Jul 2020

- Recognized as a Role Model at annual company conference
- Maintained Kafka/Zookeeper and Redis clusters (400+ nodes)
- Built automated log analysis tool to identify responsible team for data build errors
- Predicted cluster utilization for FY planning using timeseries data (Python pandas, numPy)
- Became go-to Splunk expert (power user) to manage dashboards, alerts, and lookups across teams
- Diagnosed slow and failed Hadoop and Spark jobs, wrote many Python automation scripts w/ internal/external APIs

RESEARCH and ACADEMIC EXPERIENCE

Academic Papers and Projects

Text Generation and Compressibility Analysis of Online Discourse Feb 2021 – present

- Currently gathering and preprocessing data. I plan to investigate changes in correlation length and compressibility before, during, and after the r/WallstreetBets forum exploded in popularity

A Critical Analysis of an Ant Excavation Model (available here) Oct 2020 – Jan 2021

- Implemented existing ant colony model and raised new evidence to support a claim about the model's mechanisms and to question its plenitude

Do Character Networks Influence Movie Ratings? Aug 2017 – Sep 2017

- Investigated if movie ratings can be predicted from their character networks
- Fit regression and classification ML models to clique-relaxation numbers

Simulation Crowd Management (available here) May 2017 – Aug 2017

- Implemented several crowd models from literature and tuned parameters to reflect empirical data
- Quantified model performance and identified problematic situations for each model

Complexity Working Group – Bay Area, CA Apr 2018 – Oct 2018
Independent Researcher

- Joined up with several Complexity Weekend hackathon founders to form an independent research group and applied for a DARPA grant to investigate a top-down causal model for physiology using time-series data (available here)

Industrial & Systems Engineering Dept. – Dwight Look College of Engineering, TAMU
Peer Teacher Assistant Aug 2016 – Dec 2017

- Aided professors in teaching Visual Basic for Applications
- Independently designed and held exam review sessions, graded homework/proctored exams, held weekly office hours

NOTABLE COURSES by May 2021

Artificial Neural Networks
Advanced Neural Networks
Financial Time-Series
Dynamical Systems
Simulation of Complex Systems
Computational Biology
Stochastic Optimization Algorithms
Operations Research (linear & stochastic)
Information Theory for Complex Systems

RELEVANT SKILLS

Programming languages: Python, R, VBA, MATLAB, C++, Bash, SQL
Distributed systems & technologies: Hadoop, Kafka, Redis, Splunk