Connor Riley

CTO
Ontra Mobility

https://ctriley.github.io/

Education

Sept 2018 – Aug 2022	**Ph.D. Student, Industrial and Systems Engineering**, *Georgia Institute of Technology*. Advised by Pascal Van Hentenryck
Sept 2016 – Aug 2018	**Ph.D. Student, Industrial and Operations Engineering**, *University of Michigan*. Advised by Pascal Van Hentenryck
May 2016	**B.S.E., Computer Science and Engineering**, *University of Connecticut*, *summa cum laude*. Minor: Mathematics; Honors Thesis: *Equivalent Representations of Circle Packings*

Experience

March 2023 – Present	**Ontra Mobility**, *CTO*, New York, New York. Building a next generation platform for planning and operating on-demand multimodal transit systems.
Nov 2023 – Present	**AI Institute for Advances in Optimization**, *Research Engineer*, New York, New York. Leading a team of Ph.D. students and Postdocs to build a SaaS platform for operating on-demand multimodal tranist systems. Developing state-of-the-art algorithms for trip-planning and ridesharing with transfers to fixed-route. Interfacing with our partners at Chatham Area Transit to deploy our software in Savannah, GA.
Aug 2022 – Nov 2023	**Google**, *Software Engineer*, New York, New York. Developing, testing, and deploying new features for Google Display Ads to optimize revenue.
Sept 2018 – Aug 2022	**Georgia Institute of Technology**, *Research Assistant*, Atlanta, Georgia. Designing and deploying microservices on Azure Kubernetes Service for MARTA Reach, an on-demand ride-sharing service in Atlanta, GA. Developing state-of-the-art optimization and artificial intelligence software using C++ for operating on-demand ride-sharing and multimodal transit systems. Created and maintained a python library using boost to wrap high-performance C++ code for use by less technical users.
May 2016 – Aug 2018	**The University of Michigan**, *Research Assistant*, Ann Arbor, Michigan. Developing simulation, optimization, and artificial intelligence software in C++ and python for the design and operation of multimodal transit systems. Deployed an on-demand ride-sharing service at U-M using redis queues for pub/sub with websockets, rabbitmq and celery for managing distributed task queues, and mongoDB for storing state information.
Dec 2014 – May 2016	**Center for Voting Technology Research**, *Undergraduate Research Assistant*, Storrs, Connecticut. Wrote python scripts to evalutate the functionality and security of various electronic pollbook solutions.
May 2015 – Aug 2015	**United Technologies Building & Industrial Systems (UTC) – Otis Elevator Company**, *Engineering Intern*, Farmington, Connecticut. Developed a Java application to translate UI labels, stored in XML, into the spoken language selected by the user.
Aug 2014 – Dec 2014	**Cigna Corporation**, *Software Development Intern*, Storrs, Connecticut.
June 2014 – Aug 2014	**Travelers Insurance Company**, *IT Intern*, Hartford, Connecticut.

Service

Summer 2017, 2018, 2019, 2020	**The Seth Bonder Camp in Computation and Data Science**, *Lab Coordinator*, Ann Arbor, Michigan and Atlanta, Georgia. Developed and ran lab activities in Snap! and python designed to teach Computer Science concepts camp attendees.

Skills

General	C++ (CMake, Boost, abseil, ninja), Rust, Java, Python, C, Node.js / Typescript, MATLAB, Bash, Protobuf, Bazel, Linix, Git, Github (actions, precommit), Mercurial, LaTeX.
Optimization Libraries	Gurobi, CPLEX, OPL, OR-Tools.
Cloud Computing	Kubernetes, Docker, Azure (AKS, CosmosDB, CR, AppGateway, Automation, Virutal Machines, Virtual Networks), Google Cloud Platform (Virtual Machines, DNS), gRPC, redis, celery, rabbitmq,
High Performance Computing	Apache Beam, MPI, OpenMP, CUDA, Slurm, PBS, HTCondor.

Awards & Honors

2022	Van Hentenryck Fellowship, GT Industrial & Systems Engineering Department
2016	Graduate Fellowship, UM Industrial Operations Engineering Department
2015	Certificate of Outstanding Academic Achievement, UConn Computer Science and Engineering Department
2014	Babbidge Scholar, The University of Connecticut
2012 – 2016	Dean's List, UConn School of Engineering
2012 – 2016	Academic Excellence Scholarship, The University of Connecticut

Affiliations

2016 – Present	Institute for Operations Research and the Management Sciences
2011 – Present	Tau Beta Pi (The Engineering Honor Society)
2010 – Present	Upsilon Pi Epsilon (The Computer Science Honor Society, Secretary for the University of Connecticut Chapter 2011-2012)
2010 – Present	ACM (Association for Computing Machinery)

Publications

Conference & Journal Papers

[1] Jiawei Lu, Connor Riley, Krishna Murthy Gurumurthy, and Pascal Van Hentenryck. Revitalizing public transit in low ridership areas: An exploration of on-demand multimodal transit systems, 2023.

[2] Tejas Santanam, Anthony Trasatti, Hanyu Zhang, Connor Riley, Pascal Van Hentenryck, and Ramayya Krishnan. Changes in commuter behavior from covid-19 lockdowns in the atlanta metropolitan area, 2023.

[3] Pascal Van Hentenryck, Connor Riley, Anthony Trasatti, Hongzhao Guan, Tejas Santanam, Jorge A. Huertas, and Samson Baskin. Marta reach: Pilot of an on-demand multimodal transit system in atlanta. *In preparation*, 2023.

[4] Connor Riley. *Operating On-Demand Ride-Sharing Services*. PhD thesis, Georgia Institute of Technology, 2022.

[5] Ramon Auad, Kevin Dalmeijer, Connor Riley, Tejas Santanam, Anthony Trasatti, Pascal Van Hentenryck, and Hanyu Zhang. Resiliency of on-demand multimodal transit systems during a pandemic. *Transportation Research Part C: Emerging Technologies*, 133:103418, 2021.

[6] Thomas Ying-Jeh Chen, Connor Thomas Riley, Pascal Van Hentenryck, and Seth David Guikema. Optimizing inspection routes in pipeline networks. *Reliability Engineering & System Safety*, 195:106700, 2020.

[7] Connor Riley, Pascal van Hentenryck, and Enpeng Yuan. Real-time dispatching of large-scale ride-sharing systems: Integrating optimization, machine learning, and model predictive control.

In Christian Bessiere, editor, *Proceedings of the Twenty-Ninth International Joint Conference on Artificial Intelligence, IJCAI-20*, pages 4417–4423. International Joint Conferences on Artificial Intelligence Organization, 2020. Special track on AI for CompSust and Human well-being.

[8] Connor Riley, Antoine Legrain, and Pascal Van Hentenryck. Column generation for real-time ride-sharing operations. In Louis-Martin Rousseau and Kostas Stergiou, editors, *Integration of Constraint Programming, Artificial Intelligence, and Operations Research*, pages 472–487, Cham, 2019. Springer International Publishing.

[9] Kevin Pratt, Connor Riley, and Donald Sheehy. Exploring Circle Packing Algorithms. In Sándor Fekete and Anna Lubiw, editors, *32nd International Symposium on Computational Geometry (SoCG 2016)*, volume 51 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pages 69:1–69:4, Dagstuhl, Germany, 2016. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik.