
SUMMARY & SKILLS

I have a broad interest in computer science. My research interests include distributed computing, the internet of things (IoT), blockchain, mobile robotics, discrete mathematics, computational geometry, and game theory.

Languages: Python, C/C++, Java, JavaScript

Technologies/Frameworks: Docker, Tendermint, Git, React, Gitpod

Graduate Courses: Advanced Algorithm Design, Distributed Systems, Formal Verification, Randomized Algorithms, Theory of Computation, High-Performance Computing, Programming Languages, Operating Systems

EDUCATION

University of Southern California

Ph.D. in Computer Science; GPA: 4.0

Los Angeles, CA

Aug 2020 – Present

California State University, Long Beach

Master of Science in Computer Science; GPA: 4.0

Long Beach, CA

Aug 2018 – May 2020

Bachelor of Science in Computer Science; GPA: 3.6

Aug 2013 – May 2018

EXPERIENCE

The Aerospace Corporation

Member of the Technical Staff

Associate Member of the Technical Staff

Intern

El Segundo, CA

Mar 2020 – Present

Sep 2018 – Mar 2020

Jan 2018 – Aug 2018

- Design software that helps Aerospace rapidly develop scalable, modular, and efficient analyses for launch vehicle verification in simulation, day-of-launch, and post-flight environments.

CSULB Research Foundation

Student Research Assistant

Long Beach, CA

Mar 2017 – May 2018

- Developed software and simulations for systems of cooperative robots.

PUBLICATIONS

DARSAN: A Decentralized Review System Suitable for NFT Marketplaces

Sulyab Thottungal Valapu, Tamoghna Sarkar, Jared Ray Coleman, Anusha Avyukt, Hugo Embrechts, Dimitri Torfs, Michele Minelli, Bhaskar Krishnamachari

ICBC 2023 - International Conference on Blockchain

Search and Rescue on the Line

Jared Coleman, Lorand Cheng, Bhaskar Krishnamachari

SIROCCO 2023 - International Colloquium on Structural Information and Communication Complexity

PhD Forum Abstract: Cooperative Problem-Solving with Systems of Constrained Mobile Agents

Jared Ray Coleman

IPSN 2023 - International Conference on Information Processing in Sensor Networks

Graph Convolutional Network-based Scheduler for Distributing Computation in the IoRT

Jared Coleman, Mehrdad Kiamari, Lillian Clark, Daniel D'Souza, Bhaskar Krishnamachari

MILCOM 2023 WS-7 - Workshop On The Internet Of Things For Adversarial Environments

Delivery to Safety with Two Cooperating Robots

Jared Coleman, Evangelos Kranakis, Danny Krizanc, Oscar Morales-Ponce

SOFSEM 2023 - International Conference on Current Trends in Theory and Practice of Computer Science

The Snow Plow Problem: Perpetual Maintenance by Mobile Agents on the Line

Jared Coleman, Oscar Morales-Ponce

ICDCN 2023 - International Conference on Distributed Computing and Networking

Line Search for an Oblivious Moving Target

Jared Coleman, Evangelos Kranakis, Danny Krizanc, Oscar Morales-Ponce

OPODIS 2022 - International Conference on Principles of Distributed Systems

Multi-Objective Network Synthesis for Dispersed Computing in Tactical Environments

Jared Coleman, Eugenio Grippo, Bhaskar Krishnamachari, Gunjan Verma

SPIE Defense + Commercial Sensing 2022

Network Synthesis for Tactical Environments: Scenario, Challenges, and Opportunities

Tzanis Anevlavis, Jonathan Bunton, Jared Coleman, Mine Dogan, Eugenio Grippo, Abel Souza, Christina Fragouli

Bhaskar Krishnamachari, Matthew Maness, Karl Olson, Prashant Shenoy, Paulo Tabuada, Gunjan Verma

SPIE Defense + Commercial Sensing 2022

Robotic Sorting on the Grid

Jared Coleman, Oscar Morales-Ponce

ICDCN 2022 - 23rd International Conference on Distributed Computing and Networking

Message Delivery in the Plane by Robots with Different Speeds

Jared Coleman, Evangelos Kranakis, Oscar Morales-Ponce, Danny Krizanc

SSS 2021 - 23rd International Symposium on Stabilization, Safety, and Security of Distributed Systems

The Pony Express Communication Problem

Jared Coleman, Evangelos Kranakis, Oscar Morales-Ponce, Danny Krizanc

IWOCA 2021 - 32nd International Workshop on Combinatorial Algorithms

Minimizing The Maximum Distance Traveled To Form Patterns With Systems of Mobile Robots

Jared Coleman, Evangelos Kranakis, Oscar Morales-Ponce, Jorge Urrutia, Birgit Vogtenhuber

CCCG 2020, 32nd Canadian Conference on Computational Geometry, August 5-7, 2020

PROJECTS

ChatLang (eclipse.usc.edu/chatlang)

An LLM-powered role-playing bot with parallel tutor assistance

2023

Kubishi Sentences (sentences.kubishi.com)

An LLM-powered sentence builder/translator for the Owens Valley Paiute Language

2023

GCN-Turtlebot (github.com/ANRGUSC/gcnschedule-turtlenet)

GCN-based Scheduler for Distributing Computation in the Internet of Robotic Things

First-place winner: 2nd Student Design Competition on Networked Computing on the Edge at CPS IoT Week 2022

Secure IIoT

Autonomous Networks Research Group & Chevron

Using blockchain technology to secure industrial IoT systems

Kubishi (kubishi.com)

An online dictionary and encyclopedia for Owens Valley Paiute language and culture

2020

Aerocube @ The Beach

CSULB & The Aerospace Corporation

Distributed robotics systems for space - a proof of concept

2017