

# CHRISTOPHER DECAROLIS

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## PROFESSIONAL EXPERIENCE

### Tech Lead

July 2020 - Present

Dagster Labs | San Francisco, CA

- **Company Growth:** 7th hire, scaled with company to 100+ employees
- **Tech Lead, Integrations & Deployment (2024-Present):** Led advocacy, design, and implementation for features across the R&D organization resulting in landing multiple tastemaker logos; oversaw dbt Cloud, Iceberg, and Tableau integrations securing "unicorn" upsells
- **Senior Software Engineer (2023-2024):** Architected Airlift (Dagster-Airflow integration) enabling Fortune 500 deals and measurably increasing enterprise close rates; built multi-cloud platform supporting GCP, AWS Airflow, and Astronomer; collaborated in enterprise deal cycles alongside sales teams
- **Software Engineer, Cloud (2022-2023):** Built zero-downtime Kubernetes/ECS deployments, enterprise alerting platform (90% adoption), and billing system processing >\$1M ARR annually
- **Software Engineer, API Product (2020-2022):** Led development of memoization and dependency injection systems used by nearly all customers; coordinated Dagster 1.0 release maintaining backward compatibility

### Software Engineer Intern

June - August 2019

Airbnb (Return Offer Received) | San Francisco Bay Area, CA

- Architected time window aggregation system for BigHead ML platform, achieving **O(n) complexity improvement** from O(n<sup>2</sup>) through novel caching strategies
- Built sophisticated Scala framework using Twitter Algebird serving **millions of events per second** for booking prediction, pricing optimization, and fraud detection

### ML Engineering Intern

August - November 2018

Facebook (Return Offer Received) | Greater Seattle Area, WA

- Optimized ads ML infrastructure achieving **50% latency reduction**; accelerated model training from days to hours enabling real-time experimentation
- Pioneered new ML features in C++ through cross-functional collaboration

### Software Engineering Intern (AI&R)

May - August 2018

Microsoft (Return Offer Received) | Greater Seattle Area, WA

- Developed end-to-end ML system for Bing ads keyword recommendation; processed **petabyte-scale** data using MapReduce, SQL, C#
- Innovated ML training methods (Skip Gram, Noise Contrastive Estimation); experimented with TensorFlow, XGBoost, CNNs

### Teaching Assistant

January - May 2019

University of Maryland | College Park, MD

- CMSC422: Machine Learning

## RESEARCH EXPERIENCE

### Database Systems Research | Prof. Daniel Abadi, UMIACS | Jan-Jun 2020

**SIGMOD 2025:** "Are database system researchers making correct assumptions about transaction workloads?" - Led formulation of novel transaction taxonomy and workload categorization across open source projects, challenging fundamental database system design assumptions

### Privacy-Preserving ML Research | Prof. Furong Huang | Sep 2017-Jan 2020

**ICML 2020:** "An end-to-end Differentially Private Latent Dirichlet Allocation Using a Spectral Algorithm" (arXiv:1805.10341) - Collaborated on complexity bound proofs, designed experimental architecture, engaged broader research community in privacy-preserving ML

## EDUCATION

University of Maryland | College Park, MD

## TECHNICAL SKILLS

**Languages:** Python, TypeScript, GraphQL, Scala, C++, C#, SQL, JavaScript

**Technologies:** AWS, Dagster, dbt, Airflow, Kubernetes, Postgres, MapReduce, PyTorch, TensorFlow

**Expertise:** API Design, Product Infrastructure, ML Infrastructure, Distributed Systems, Cross-functional Collaboration, Early Stage Engineering Growth