Joseph DeChicchis

josephdechicchis@gmail.com | https://www.dechicchis.com

EDUCATION

Duke University   Durham, NC

2016– 2020   B.S., Computer Science with Highest Distinction
                             Philosophy (minor)

EXPERIENCE

Clear Street   New York, NY

Feb '23 –
Present

Tech Lead, Senior Software Engineer (Developer Experience, Infrastructure)
- Leading a team of five engineers focused on Developer Experience.
- Team ownership includes: CI platform, deployment tooling, non-production environments, observability, developer tooling, and some core shared services.
- Responsible for the technical execution of the team. Balancing engineering quality with speed in a fast-paced and growing startup environment.
- Supported the growth of team members resulting in successful promotions.
- Led a major initiative spanning two quarters to migrate code storage and CI from GitLab to GitHub to improve the developer experience and CI performance and availability.
- Enhanced configuration management by setting up CICD to manage observability components (e.g., monitors and dashboards) via Terraform.
- Revamped the team's interview process with new questions and expectations.

Oct '22 –
Feb '23

Tech Lead, Software Engineer (Developer Experience, Infrastructure)
- Oversaw high-impact additions to Ivy (an internal tool to spin up ephemeral environments) to support S3 buckets and Snowflake integrations. Added support for public-facing ephemeral environments to enable use cases such as customer demos and UAT environments.
- Evangelized engineering best practices by revamping internal documentation and adding concise "How-To" guides. Created cookiecutters to template common developer workflows.
- Facilitated a team-wide effort to improve monitoring coverage from 30% to over 90%.
- Executed a project to accurately monitor clock skew in our Kubernetes nodes to comply with regulatory requirements.
- Guided the rebuild of a core service that forwards Kafka messages to our Argo cluster to trigger various business-critical ETL workflows.

Jul '20 –
Oct '22

Software Engineer (Infrastructure)
- Improved builds and reduced CI times by an order of magnitude.
- Designed and built a deployment tool (SLeD) reducing deployment times from weeks to days.
- Designed and built Ivy, a system that can bring up a fully functioning ephemeral development environment for manual and automated testing in around 10 minutes.
- Revamped internal Protobuf and gRPC tooling to improve the developer experience.
- Evangelized proper API design with improved documentation and linter configurations.
- Helped onboard and mentor new engineers.
- Participated in the production and internal support on-call rotations.

Lyft   Palo Alto, CA

May '19 –
Aug '19

Compute Engineer Intern (Level 5, Self-Driving Division)
- Worked on a project to increase the compute efficiency (low latency and low power) of the on-vehicle compute system while maintaining thermal limits using hardware accelerators.
- Incorporated software optimizations to improve neural network inference performance while minimizing negative effects on model accuracy.
- Used popular machine learning frameworks such as TensorFlow and PyTorch as well as hardware-specific tools to validate various methods of improving computing efficiency.

Microsoft   Redmond, WA

May '18 –   **Software Engineer Intern (Service Fabric)**
Aug '18   - Developed an internal diagnostic tool to improve engineering efficiency for Service Fabric,
               Azure's open-source distributed computing platform.
             - Designed the tool to be extensible, so team members can add additional functionality to the
               tool with minimal effort, and provided step-by-step documentation.
             - Reduced the amount of time it takes to diagnose common issues by an order of magnitude.

Duke University   Durham, NC

Aug '18 –   **Head UTA for ECE/CS 250 (Computer Architecture)**
May '20   - Led a team of 20 to 25 Undergraduate Teaching Assistants (UTAs).
             - Worked with the course Professor and Graduate Teaching Assistants on course logistics and
               material in addition to continuing the duties of a UTA.
             - Received an Undergraduate Teaching Assistant Citation every semester and an Outstanding
               Undergraduate Teaching Award for the 2018–2019 and 2019–2020 academic years.

Aug '17 –   **UTA for ECE/CS 250 (Computer Architecture)**
Aug '18   - Undergraduate Teaching Assistant (UTA) for an introductory computer architecture class
               that covers C, assembly (MIPS), processor design, memory, and I/O.
             - Duties included: grading homework assignments and exams; leading out-of-class recitation
               sections; holding office hours; preparing study materials; responding to student questions.

Apple   Cupertino, CA

May '17 –   **Software Engineering Intern (Watch Software)**
Aug '17   - Developed a prototype system for communication between two iOS-enabled devices.
             - Worked with mail protocols, natural language applications of machine learning, and
               networking and database technologies.

SKILLS

Technologies   Kubernetes, AWS, Infrastructure as Code (Terraform), Observability (Datadog), GitLab
                     and GitHub CI, Artifactory, gRPC & Protobuf, API Design, PostgreSQL, Redis, Kafka,
                     Distributed Systems, Authentication & Authorization

Languages   *Proficient*: Go, Python, Terraform, Dart/Flutter

                     Familiar: C, C++, C#, Java, Rust, Swift, Objective-C, Scheme, Javascript, HTML, CSS,
                     Verilog, HTML, Ruby, GNU Octave, MATLAB

Human Languages English, Japanese

PROJECTS & PUBLICATIONS

MyWatchlist: Movies & TV Shows   January 2021 – Present
- Built an iOS app using Flutter to track movies and TV shows to watch. Reached over 4000 active monthly
  users. Website: https://www.mywatchlist.video

Semantic Understanding for AR   Aug 2019 – May 2020, Duke University
- Built and deployed a system to explore applications of semantic understanding in AR devices.
- Thesis: Honors thesis earned Graduation with Highest Distinction.

Adaptive AR Output Security   Jan 2019 – Apr 2019, Duke University
- Deployed an application on the Magic Leap One which ensures that holograms do not obstruct important
  real-world objects using a policy trained by reinforcement learning (report).
- Demo Abstract: Joseph DeChicchis, Surin Ahn, and Maria Gorlatova. 2019. Adaptive AR Visual Output
  Security using Reinforcement Learning Trained Policies: Demo Abstract. In Proceedings of the 17th
  Conference on Embedded Networked Sensor Systems (SenSys '19). ACM, New York, NY, USA, 380-381.
- Demo: 17th Conference on Embedded Networked Sensor Systems on adaptive AR visual output security.