Hantao (Will) Wang

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(310) 293-4575

EDUCATION

UC Berkeley

M.S. in Computer Science (Planned)　　　　　　　　　　　　　　　　　　　August 2019 - May 2020
B.S. in Electrical Engineering and Computer Science　　　　　　　　　　　August 2016 - May 2019
Tech GPA: 3.98, Cum GPA: 3.85
Eta Kappa Nu (HKN), Deans Honor List (Spring 17, Fall 17, Spring 18)

Selected Coursework: Operating Systems, Internet Architecture and Protocols, Computer Security, Algorithms, Computer Architecture, Probability and Random Processes

Languages: Go, Python, Java, C, JavaScript, SQL, HTML/CSS, Latex
Skills/Interests: Distributed Systrems, Infrastructure, Networking, Kubernetes, Containers

EXPERIENCE

Network Systems Lab

Research Assistant　　　　　　　　　　　　　　　　　　　　　　　　　　　　April 2017 - Present
– Verified Event Handlers
  – Currently researching how distributed systems respond to developer defined event driven triggers, looking at feasibility, convergence, performance issues.
  – Architectured and lead a team of 4 researchers to implement Scotty, a client side event based Kubernetes controller in Go to check and enforce complex user defined placement invariants on a Kubernetes cluster.
  – Built custom releases of Kubernetes 1.10's master side controller manager to support the event tracing and pod scheduling features of Scotty.
– Throttlebot (Paper under submission at NSDI 19)
  – Large scale resource allocation optimization in distributed systems through the elimination of resource over and under provisioning.
  – Created Throttlebot, a black box tool that jointly tunes resource limits in a distributed application to optimized for cost and performance by systematically throttling container resources.
  – Designed unqiue distributed applications using a variety of common microservices for experiments to show not only Throttlebot's effectiveness but also the difficulty of manually tuning based off resource utilization.
– Authored a Medium article on Microservice Archtiecture, published on Hackernoon (1.4k+ claps)

Kelda

Software Engineering Intern　　　　　　　　　　　　　　　　　　　　　　　May 2018 - August 2018
– Worked with a small team of researchers from NetSys on making Kubernetes more accessible by creating a local development tool that eases the complex CI/CD and incident response pipelines.
– Set up applications on GKE, AWS, and Minikube along with monitoring, logging, and CI/CD tools such as Jenkins, Spinnaker, Gitlab, Prometheus, Elasticsearch, etc.
– Identified pain points working with the current major tools in the environment and analyzed the technical implementations and limitations of these tools.

Berkeleytime

Backend Engineering Lead　　　　　　　　　　　　　　　　　　　　　　　　July 2018 - Present
Backend Developer　　　　　　　　　　　　　　　　　　　　　　　　　　　April 2017 - July 2018
– Berkeleytime is Berkeley's most popular course catalog website, with over 26,000 unique monthly users.
– Implemented user authentication, accounts, and worked on both frontend and backend aspects of the scheduler.
– Leading a team of 4-5 engineers on migration from Heroku to a microservices on Kubernetes, redesigning the system architecture, and creating new services to efficiently handle data lookup, caching, and search.

TEACHING

CS 168: Internet Architecture and Protocols (uGSI)　　　　　　　　　　　August 2018 - Present
– Currently working on writing a new class project on transport.

Computer Science Mentors (Junior Mentor)　　　　　　　　　　　　　　　January 2018 - May 2018
– Created course material on Weighted Quick Union w/ Path Compression and its amortization proof.