KEYAN PISHDADIAN

(774) 273-3047
kpishdadian@gmail.com

keyanp.com
github.com/keyan
linkedin.com/in/keyanp

INTERESTS

robotics, machine learning, parallel and distributed systems, transportation, healthcare, economics

EDUCATION

M.Sc. Computer Science & Engineering, University of Washington; Seattle, WA **Dec 2021**

B.Sc. Microbiology, University of Vermont; Burlington, VT **2013**

FULL-TIME INDUSTRY EXPERIENCE

Dropbox, Senior Software Engineer; Seattle, WA **Jan 2021 – March 2021**

- ◇ Worked on a petabyte-scale distributed system spanning thousands of machines that handles most of the company's metadata *Go*
- ◇ Left this role in order to focus on finishing graduate school

Lyft, Senior Software Engineer; Seattle, WA **March 2018 – Dec 2020**

- ◇ Developed alternative (to cars) transportation options and multimodal journey planning by adding walking, scooter, transit, and multimodal modes to the app in multiple cities across the country
- ◇ Developed novel routing engine which can compute multimodal journeys in transit dense regions in <100ms, saving millions of dollars in external API costs *Go, C++*
- ◇ Productionized research using fuzzy logic for multicriteria evaluation of transit journeys *C++*
- ◇ Designed, developed, and shipped a feature allowing users to perform geospatial search and access realtime nearby transit information, highlighted in *Wired* and *Bloomberg* *Python*

Teachers Pay Teachers, Software Engineer; New York, NY **Sep 2016 – Feb 2018**

- ◇ Designed and developed a distributed asynchronous task processor service to replace an unreliable legacy system and contributed significant time to improving an open-source system (*github.com/edgurgel/verk*) to power this service
- ◇ Guided an organizational migration to Kubernetes by creating a protocol for launching new services, a continuous integration and deployment pipeline for containers, and an internal web application to centralize the deployment process (some aspects discussed in *keyanp.com/tonic.html*, *keyanp.com/jenkins.html*) *Elixir*

Venmo (subsidiary of PayPal), Software Engineer; New York, NY **May 2015 – Aug 2016**

- ◇ Wore many hats on the small team with projects spanning system reliability and scalability, developer tools and environments, API development, data migrations, test suite refactoring, data security, and automated infrastructure management *Python/Django*

OTHER EXPERIENCE

Waymo, Software Engineer Intern; Mountain View, CA **Summer 2021**

- ◇ Behavior team, applied machine learning for self-driving car trajectory selection *C++, Python, Tensorflow*

Recurse Center, Recurser; New York, NY **Jan 2015 – Mar 2015**

- ◇ A self described "retreat for programmers" (*recurse.com*) where I talked about, read about, and programmed computers

University of Vermont Medical Center, Research Assistant; Burlington, VT **May 2013 – Dec 2014**

- ◇ Studied genetic regulation of sporulation in the bacterium *Clostridium difficile*
- ◇ Coauthored three papers published in medical journals (*link*)

KEYAN PISHDADIAN

PROJECTS

Personal Robotics Lab at University of Washington
Developed a MVP simulation environment in Gazebo/ROS for an autonomous robot feeding arm, researched methods for deformable object simulation

Routing Engine Development
Independent study of road routing engine systems through reading and implementation of routing algorithms, see: *https://github.com/keyan/route_planner*, *https://github.com/keyan/ev_routing_engine*

Open Source
Maintainer and contributor to various open source projects including: pallets/Flask (*link to contributions*), facebook/codemod (*link to contributions*), edgurgel/Verk (*link to contributions*)

PATENTS

U.S. Patent 16/836,141 "Multi-Modal Route Generation System" (provisional application filed 31 March 2020).

PUBLICATIONS

Ribis, J.W., Ravichandran, P., Putnam, E.E., **Pishdadian, K.**, & Shen, A. (2017) The Conserved Spore Coat Protein SpoVM Is Largely Dispensable in *Clostridium difficile* Spore Formation. ***mSphere***, e00315-17.

Shen, A., Fimlaid, K.A., & **Pishdadian, K.**, (2016) Inducing and Quantifying *Clostridium difficile* Spore Formation. ***Methods in Molecular Biology***, 1476:129-42.

Pishdadian, K., Fimlaid, K.A., & Shen, A., (2015) SpoIIID-mediated regulation of σ^{K} function during *Clostridium difficile* sporulation. ***Molecular Microbiology***, 95:189–208.

CERTIFICATIONS

Deep Learning Specialization, deeplearning.ai [Coursera] **2019**