Yubai Di

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EDUCATION

University of California, San Diego 2018 - Present
M.S in Computer Science Expected Graduation Year: 2019

Pomona College 2012 - 2016
Bachelor of Arts in Mathmatics and Computer Science

RESEARCH EXPERIENCE

Latent-space Motion Planning 2018 -
Advanced Robotics and Control Lab, UC San Diego

- Built a MLDP model for predicting if a robot configuration is in collision-free or in-collision space;
- Working on devising dimensionality-reduction methods for planning on high DOF robots, e.g Baxter;

Intrinsically Strong Linking in Complete Graphs 2015 - 2016
Pomona College Mathematics Department

- Built a package in Java that computes the linking number of all pairs of cycle given an spatial embedding;
- Reconstructed the problem of finding minimal strongly-linked complete graph into an optimization problem;

INDUSTRY EXPERIENCE

Amazon Lab126 July 2017 - June 2018
Software Engineer

- Delivered the geolocation-triggered routine feature on Alexa devices;
- Built the backend service for storing and querying dynamic geolocation of GPS and Alexa-enabled devices;
- Designed and implemented GDPR rules for Alexa Location Services;

Amazon Web Services October 2016 - July 2017
Software Engineer

- Maintained a system that traverses daily the keymap of AWS Simple Storage System (S3), which stores trillions of object keys and serving millions of request per second;
- Delivered the prefix-filtering feature for inventorying objects in S3;

Amazon Web Services Summer 2015
Software Engineer Intern

- Designed and built an in-production user-interface for a system traversing daily the Keymap of AWS Simple Storage Systems (S3);

HONORS AND GRANTS

Park City Mathematics Institute Undergradudate Summer School, NSF Summer 2016
The Summer Undergraduate Research Program, Pomona College Summer 2014
Pomona College Scholar 2012-2013

TEACHING EXPERIENCE

Pomona College Quantitive Skills Center 2013-2014
Math Fellow

· Tutored Linear Algebra and Real Analysis;
· Held the highest rate of hours being scheduled by students for the academic year (46 percent);

Harvey Mudd College Fall 2015
Tutor & Grader for CS151 Artificial Intelligence

· Held weekly mentoring sessions to help students work on assignments and projects.

SELECTED COURSEWORK

Graduate: Computer Vision I, Machine Learning, Sensing & Estimation in Robotics

Undergraduate: Monte Carlo Methods, Abstract Algebra, Real Analysis, Topology, Probability & Statistical Theory, Artificial Intelligence, Machine Learning, Autonomous Robot Navigation

LANGUAGE AND TECHNOLOGIES

Programming Languages: Java, Python, Javascript, Ruby, Matlab, LaTeX;

ML and Robotics technologies: PyTorch, Tensorflow, SkLearn, ROS Kinetic, Rviz, Moveit!, OpenCV

Web technologies: AWS suite, Rails, Jquery, Bootstrap, Git, Docker;

Operating Systems: Unix, Linux