Yubai Di

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EDUCATION

University of California, San Diego 2018 - Present
M.S in Computer Science Expected Graduation Year: 2020

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

RESEARCH EXPERIENCE

Machine Learning for Collision Detection 2018 -
Advanced Robotics and Control Lab, UC San Diego

- Devised a method to produce collision-free configurations for high degree freedom robot with generative models
- Concurrently working on learning confidence score for proxy collision checker using discriminative models

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);

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.

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

SELECTED COURSEWORK

Graduate: Computer Vision, Machine Learning, Sensing & Estimation in Robotics, Planning & Learning in Robotics, Networked Systems, Reinforcement Learning (IP)

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