Brad Saund PhD

Work Experience (4 years)

2022–2023 **Senior Software Engineer II**, *Cruise*, San Francisco.
I led technical projects for behaviors and simulation of autonomous vehicles

2021–2022 **SDE II**, *AWS Robotics*, Sunnyvale.
I founded a team for a new AWS service offering robotic solutions for AWS customers

2014–2015 **SDE**, *Amazon*, Seattle.
I supported ad deployments to Kindle E-readers and Tablets.

2012–2014 **Robotics Engineer**, *Electroimpact*, Seattle.
I designed, built, and programmed robots that build airplanes

Education (BS, MS, PhD in Robotics)

2017–2021 **PhD Robotics**, *University of Michigan*.
Path planning for manipulation

2015–2017 **Master's of Robotics**, *Carnegie Mellon*.
Path planning and precision localization in confined spaces

2008–2012 **BS Mechanical Engineering**, *Caltech*.

2010–2012 **Research Fellow**, *Caltech*, Pasadena.
Fluid Dynamics Research

Skills

Programming Git, ROS, Tensorflow, OpenCV, C++, Python, Java, Matlab

Deployment Supporting production environments of both software and hardware to millions of machines (Kindle) and machines worth millions of dollars (aerospace robots)

Robotics Path Planning with Uncertainty, Sensor Fusion, Localization, Autonomous Vision and Navigation

Selected Publications (see www.bradsaund.com for a complete list)

2021 **Brad Saund** and Dmitry Berenson "CLASP: Constrained Latent Shape Projection for Refining Object Shape from Robot Contact", CoRL

2020 **Brad Saund** and Dmitry Berenson "Diverse Plausible Shape Completions from Ambiguous Depth Images", CoRL

Brad Saund and Dmitry Berenson "Fast Planning Over Roadmaps via Selective Densification" 2020, RA-L (with ICRA presentation)

2019 **Brad Saund**, Sanjiban Choudhury, Siddhartha Srinivasa and Dmitry Berenson "The Blindfolded Robot: A Bayesian Approach to Planning with Contact Feedback", ISRR

2017 **Brad Saund** "Planning and Localizing under Contact Uncertainty", Carnegie Mellon Master's Thesis

2013 **Brad Saund** and Russell DeVlieg. "High Accuracy Articulated Robots with CNC Control Systems", 2013 SAE-Aerotech

References

U. Michigan
- Dmitry Berenson

Carnegie Mellon
- Reid Simmons
- Howie Choset

Electroimpact
- Russ DeVlieg

Caltech
- Matthew Heverly

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