

# Arjun Mani

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## EDUCATION

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**Columbia University** Sep 2021-Present  
*Ph.D. Candidate in Computer Science*

**Columbia University** Sep 2021-Feb 2024  
*M.S. in Computer Science*

**Princeton University** Sep 2017-May 2021  
*B.S.E. Computer Science, Summa Cum Laude*  
*Minor in Applied Mathematics*

## PUBLICATIONS

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**Arjun Mani**, Ishaan Preetam Chandratreya, Elliot Creager, Carl Vondrick, and Richard Zemel. SurfsUp: Learning Fluid Simulation for Novel Surfaces. *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, 2023. [[Arxiv](#)] [[Project Website](#)]

**Arjun Mani**, Nobline Yoo, Will Hinthorn, and Olga Russakovsky. Point and Ask: Incorporating Pointing into Visual Question Answering. *Visual Question Answering Workshop at CVPR (Poster Spotlight)*, 2021. [[Arxiv, Full Paper](#)] [[Workshop Talk](#)]

Assaf Hoogi, **Arjun Subramaniam**, Rishi Veerapaneni, and Daniel L. Rubin. Adaptive Estimation of Active Contour Parameters Using Convolutional Neural Networks and Texture Analysis. *IEEE Transactions on Medical Imaging*, 36(3), 781-791 (March 2017). [[Paper](#)]

## AWARDS AND FELLOWSHIPS

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**NSF Graduate Research Fellowship.** Awarded to support Ph.D. research. [Will complete by May 2025].

**Sigma Xi Book Award for Outstanding Undergraduate Research.** 2021  
Princeton University Computer Science.

**Outstanding Computer Science Senior Thesis Prize.** 2021  
Princeton University Computer Science.

**Best Overall Project, Princeton Applied and Computational Mathematics (PACM).** 2021  
Awarded by PACM for the Applied Mathematics Minor. [[Article](#)]

**Finalist, 2021 Hertz Fellowship.** 2021  
One of 48 finalists from over 900 applications.

**Honorable Mention, CRA Outstanding Undergraduate Researcher Award.** 2021

**Tau Beta Pi, Princeton Chapter.** 2021

**Finalist, Regeneron Science Talent Search.** 2017  
One of 40 Finalists in nation's most prestigious high school science research competition.

## SELECTED COURSEWORK

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### Columbia University

- Probabilistic Models and Machine Learning
- Convex Optimization
- Causal Inference I & II
- Computational Learning Theory

### Princeton University

- Advanced Computer Vision (Graduate)
- Theoretical Machine Learning (Graduate)
- Theoretical Deep Learning (Graduate)
- Reinforcement Learning (Graduate)
- Neural Networks
- Machine Learning and Pattern Recognition
- Advanced Algorithms (Graduate)
- Operating Systems
- Computer Networks

## TEACHING AND SERVICE

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TA for 'Neural Networks and Deep Learning' at Columbia University, Prof. Richard Zemel.

Reviewer for ICLR 2025.

Reviewer for CVPR 2022.

President, Princeton Data Science. Led tutorials for 50-100 students on basic ML algorithms and software tools.

## EXPERIENCE

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### Columbia University

Graduate Research Assistant.

**Sep 2021-Present**

### Google

Software Engineering Intern.

**Jun 2019 – Aug 2019**

### Astound.ai

Software Engineering/ML intern.

**Jun 2018 – Aug 2018**

## SKILLS AND INTERESTS

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**Programming Languages:** Python, Java, C++, Matlab, Bash, HTML/CSS

**Software:** PyTorch, Tensorflow, Numpy, Pandas, Scikit-Learn, MuJoCo (Robotics sim), BoTorch, PyTorch-Geom

**Music:** Carnatic (South Indian Classical Music) vocalist.