

Arvi Gjoka
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Present Address
New York, NY

Education

- PhD, New York University**, New York, NY (Anticipated) Summer 2025
- Geometry Computing Lab, GPA 3.8
 - Focus on differentiable simulation, inverse design and soft robotics
 - NeurIPS reviewer (2022, 2023, 2024)
 - Course Assistant for graduate Computer Graphics and Geometry Processing courses
- BA, New York University**, New York, NY May 2018
- Dual Degree in Physics and Computer Science, GPA 3.9
 - Honors: Phi Beta Kappa, Society of Physics Students

Publications

- **Soft Pneumatic Actuator Design using Differentiable Simulation**,
Arvi Gjoka, Espen Knoop, Moritz Bächer, Denis Zorin, Daniele Panozzo,
SIGGRAPH 2024
- **Differentiable solver for time-dependent deformation problems with contact**,
Zizhou Huang, Davi Colli Tozoni, Arvi Gjoka, Zachary Ferguson, Teseo Schneider, Daniele Panozzo, Denis Zorin,
ACM Transaction on Graphics, 2024
- **An Extensible Benchmark Suite for Learning to Simulate Physical Systems**,
Karl Otness, Arvi Gjoka, Joan Bruna, Daniele Panozzo, Benjamin Peherstorfer, Teseo Schneider, Denis Zorin,
NeurIPS, 2021
- **The iWildCam 2020 Competition Dataset**,
Sara Beery, Elijah Cole, Arvi Gjoka,
CVPR, 2020, Fine-Grained Visual Categorization Workshop
- **HistoryTracker: Minimizing Human Interactions in Baseball Game Annotation**,
Jorge Piazzentin Ono, Arvi Gjoka, Justin Salamon, Carlos A. Dietrich, Cludio T. Silva,
CHI, 2019

Research and Work Experience

- Intern**, Disney, Zurich, CH Summer 2022
- Worked on finite element method based optimization for applications in soft robotics
- Software Engineer**, Google, New York, NY Sept 2019 - Sept 2020
- Working as an engineer in the space of Fine Grained Visual Classification within Google Research
- Engineering Resident**, Google, New York, NY Sept 2018 - Sept 2019
- Rotated between two teams in Google Research and Google Maps
 - Worked on improving pipeline quality through feature engineering on geospatial data
- Research Assistant**, VIDA Lab at NYU Tandon, Brooklyn, NY Summer 2018
- Worked on a human-in-the-loop approach to generating baseball position tracking using historical data (granted patent)
- Computer Vision Intern**, Entrupy, New York, NY Summer 2017
- Developed classical vision and machine learning algorithms on surface textures (leather, cloth)
 - Explored failure modes of vision algorithms on in house imaged surfaces of luxury goods

Computer Skills

- Proficiency in C/C++ (libigl, Eigen), Python (SciPy packages, OpenCV, Pytorch)
- Help maintain and extend functionality in PolyFEM, a differentiable C++ finite element simulator
- Experience with ray tracing engines, geometry processing, machine learning pipelines, numerical methods for differential equations, microelectronics