

JAMES HONG

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Graduating in June 2024 and looking for research scientist/engineering roles in applied computer vision and ML.

EDUCATION

Stanford University (Expected) June 2024
Ph.D. in Computer Science GPA: 3.99

Dissertation: *Fine-grained Image and Video Analysis with Limited Supervision*
Advisor: Kayvon Fatahalian

Stanford University 2017
M.S. in Computer Science GPA: 3.96

Stanford University 2016
B.S. in Computer Science w/ Honors GPA: 3.99

Thesis: *Bark: Network Design and Access Control for Internet of Bluetooth Low Energy Things*
Advisor: Philip Levis

RESEARCH PUBLICATIONS

Learning Subject-Aware Cropping by Outpainting Professional Photos AAAI 2024
James Hong, Lu Yuan, Michaël Gharbi, Matthew Fisher, and Kayvon Fatahalian

Learning to Place Objects into Scenes by Hallucinating Scenes around Objects SyntheticData4ML @ NeurIPS 2023
Lu Yuan, James Hong, Vishnu Sarukkai, and Kayvon Fatahalian

Spotting Temporally Precise, Fine-Grained Events in Video ECCV 2022
James Hong, Haotian Zhang, Michaël Gharbi, Matthew Fisher, and Kayvon Fatahalian

Video Pose Distillation for Few-Shot, Fine-Grained Sports Action Recognition ICCV 2021
James Hong, Matthew Fisher, Michaël Gharbi, and Kayvon Fatahalian

Analyzing the Faces in a Decade of US Cable TV News KDD 2021
James Hong, Will Crichton, Haotian Zhang, Daniel Y. Fu, Jacob Ritchie, Jeremy Barenholtz, Ben Hannel, Xinwei Yao, Michaela Murray, Geraldine Moriba, Maneesh Agrawala, and Kayvon Fatahalian

Learning in situ: A Randomized Experiment in Video Streaming NSDI 2020
Francis Y. Yan, Hudson Ayers, Chenzhi Zhu, Sadjad Fouladi, James Hong, Keyi Zhang, Philip Levis, and Keith Winstein

Recall: Specifying Video Events using Compositions of Spatiotemporal Labels AI Systems @ SOSP 2019
Dan Fu, Will Crichton, James Hong, Xinwei Yao, Haotian Zhang, Anh Truong, Avaniika Narayan, Maneesh Agrawala, Christopher Ré, and Kayvon Fatahalian

Don't Talk Unless I Say So! Securing the Internet of Things With Default-Off Networking IoT-DI 2018
James Hong, Amit Levy, Laurynas Riliskis, and Philip Levis

Tethys: Collecting Sensor Data Without Infrastructure or Trust IoT-DI 2018
Holly Chiang, James Hong, Kevin Kinningham, Laurynas Riliskis, Philip Levis, and Mark Horowitz

Beetle: Flexible Communication for Bluetooth Low Energy MobiSys 2016
Amit Levy, James Hong, Laurynas Riliskis, Philip Levis, and Keith Winstein

Ravel: Programming IoT Applications as Distributed Models, Views, and Controllers IoT-App @ SenSys 2015
Laurynas Riliskis, James Hong, and Philip Levis

SKILLS

Languages: Python, C, C++, Java, Scala, Rust, JavaScript, HTML/CSS, \LaTeX

Topics: Computer Vision, NLP, Cloud Computing (GCP, AWS, Azure), Distributed Systems, Networks

WORK EXPERIENCE

- Adobe** | *Research Intern (Creative Intelligence Lab)* June 2020 — Sept. 2020
- Developed a 3D aware human pose embedding by learning view-invariance from public motion capture data.
 - Developed a novel distillation method for improving pose embedding quality on challenging, fast-paced actions where standard pose estimation is unreliable. These embeddings improve state-of-the-art accuracy when performing action classification, detection, and retrieval on several sports video datasets.
- Rubrik** | *Member of the Technical Staff Intern (Security Team)* June 2016 — Sept. 2016, June 2017 — Sept. 2017
- Distributed systems engineering for Rubrik backup appliances.
 - Implemented key management features for FIPS compliant encryption-at-rest.
 - Implemented network access control management and distributed enforcement.
- LinkedIn** | *Software Engineering Intern (Data Analytics Infrastructure)* June 2015 — Sept. 2015
- Prototyped a time-series anomaly detection framework leveraging the Pinot streaming database.
- PlayStation (formerly SNEI)** | *Software Development Intern (Experimentation Platform)* June 2014 — Sept. 2014
- Worked on time-series anomaly detection for PlayStation Store data.

TEACHING EXPERIENCE

CS149 <i>Parallel Computing</i>	Autumn 2022, Autumn 2023
CS248 <i>Interactive Computer Graphics</i>	Winter 2022
CS244N <i>Natural Language Processing with Deep Learning</i>	Winter 2017
CS244D <i>Deep Learning for Natural Language Processing</i>	Spring 2016
CS244 <i>Advanced Topics in Computer Networking</i>	Spring 2017
CS144 <i>Introduction to Computer Networking</i>	Autumn 2015, Autumn 2016
CS161 <i>Design and Analysis of Algorithms</i>	Winter 2016, Summer 2018

COURSEWORK

Systems

Advanced Topics in Operating Systems (*CS240*), Operating System (*CS140*), Advanced Topics in Networking (*CS244*), Computer Networking (*CS144*), Distributed Systems (*CS244B*), Data-Intensive Systems (*CS345S*), Database System Principles (*CS245*), Cloud Computing Technology (*CS349D*), Program Analysis and Optimization (*CS243*), Compilers (*CS143*), Programming Languages (*CS242*), Computer and Network Security (*CS155*), Image Synthesis Techniques (*CS348B*)

AI & ML

Deep Learning for Computer Vision (*CS231N*), Information Retrieval and Web Search (*CS276*), Natural Language Processing (*CS224N*), Deep Learning for Natural Language Processing (*CS224D*), Mining Massive Data Sets (*CS246* & *CS341*), Machine Learning (*CS229*), Artificial Intelligence (*CS221*), Data Visualization (*CS448B*)

Theory

Theoretical Perspective on Machine Learning (*CS369L*), Hierarchies of Integer Programming Relaxations (*CS369H*), Geometric and Topological Data Analysis (*CS233*), Continuous Mathematical Methods (*CS205L*), Convex Optimization I (*EE364A*), Graph Algorithms (*CS267*), Randomized Algorithms (*CS265*), Advanced Algorithms (*CS261*), Algorithms (*CS161*), Cryptography (*CS255*)

AWARDS

Adobe <i>Adobe Research Fellowship Finalist</i>	2022
USENIX <i>NSDI Community Award (for Puffer, Learning in situ...)</i>	2020
Brown Institute for Media Innovation <i>Magic Grant</i>	2018
Stanford University <i>B.S. conferred with distinction (GPA)</i>	2016
Tau Beta Pi <i>Member</i>	2015
Stanford University <i>President's Award for Academic Excellence</i>	2013
Stanford University <i>Introductory Seminar Excellence Award</i>	2013
NMSC <i>National Merit Scholarship</i>	2012
Society For Science <i>Intel Science Talent Search Semifinalist</i>	2012