Jack Langerman

jackmlangerman@{ nyu.edu | gmail.com } | 646.771.8131
{ github | gitlab } .com/JackLangerman + linkedin.com/in/jacklangerman/

PUBLICATIONS AND HONORS

Invited Mainstage Speaker	NYCML '19
Invited Speaker	Bertelsmann Data Exchange
EE & CE Dept. Fellowship	NYU Tandon
Video Coding Scholarship	NYU ECE
Speaker/Author	IEEE SPMB Symposium
Author	Intl. Ultrasonics Symposium
Eagle Scout	Boys Scouts of America

TECHNICAL KNOWLEDGE

Deep Learning • Machine Learning • Software Engineering • Computer Vision • Natural Language Processing • Human Computer Interaction • Parallel / Distributed ML • Cloud, Cluster & High Performance Computing

LANGUAGES / FRAMEWORKS

PyTorch • Tensorflow • SciPy/Conda Stack (NumPy / SkLearn, etc.) • Dask • Python • *nix shell / BASH / etc • HTML/CSS/Javascript • SSH • LaTeX • $\approx$ C/C++ • SQL • git • DVC

EDUCATION

Relevant Coursework

NYU

Deep Learning	(Grad)
Special Topics in Advanced ML	(Grad)
Design & Analysis of Algorithms II	(Grad)
Probability & Stochastic Processes	(Grad)
Calculus II	(Honors)

ONLINE

Linear Algebra (MIT OCW, Strang)
CS231n: Conv Nets for Visual Recognition (Stanford Online)
CS224d: Deep Learning for NLP (Stanford Online)

Degree

New York University:
Tandon School of Engineering
Computer Science

Projects

Representation Learning for TV (Viacom) • Deep BV • AlphaZero Neural Grammar Error Correction • Delving Deep into Dropout and Label Smoothing • Simplified AlphaZero • Dispatch • Weatherbet

REFERENCES

Howard Huang	(Bell Labs)
Anna Choromanska	(NYU-ML)
Yao Wang	(NYU Video Lab)

WORK EXPERIENCE / RESEARCH

BELL LABS (NOKIA/OPTICOM) | RESEARCH CONSULTANT February 2019-present | New York, NY
Spearhead monocular vision based localization at Bell Labs; design and implement novel techniques, algorithms and system architectures for applying deep learning to SLAM and precise re-localization; create framework, road-map, underlying code-base, documentation and cloud infrastructure; and oversee deployment of PoC in customer facing demo facility. Mentor summer + fall interns (UG-PhD.). Improve 3d capture rate by 100x. Focus on monocular vision/point sets, RF / multi-sensory data.

NYU VIDEO LAB | RESEARCHER May 2018-May 2019 | New York, NY
- Deep Representation Learning for TV Shows: ML lead under PI Yao Wang on research collaboration (Viacom/NYU Video Lab/NYC Media Lab). Design and implement novel pipeline using state of the art Transformer models leveraging large unsupervised corpora as well as small labeled data to learn general representations for several downstream tasks including hierarchical multi-label classification (1k+ noisy labels), as well as ranking, recommendation, retrieval, and visualization.
- 3D volumetric semantic segmentation for medical images: design and implement of novel techniques for medical image analysis and pattern recognition. Novel Neural Network / Deep Learning based pipeline outperformed the previous state-of-the-art for 3D ultrasound scans of embryonic mice by a margin of 25% (presented at IEEE SPMB).

ADVANCED MACHINE LEARNING | TEACHING ASSISTANT Jan 2019-May 2019 | New York, NY
Graduate (Masters/PhD) course on Machine Learning, "presents the main concepts, techniques, algorithms, and state-of-the-art approaches in modern machine learning from both theoretical and practical perspective." Prereqs include grad ML, Probability, + "mathematical maturity".

DELL INC. | PROJECT TECHNICAL LEAD 2015 | New York, NY

Designed and implemented five custom installations for New York Keynote / Release Event of Dell's new XPS Notebooks. Included custom computer vision, fluid simulation, social share, and projection mapping solutions. Presented work directly to Michael Dell. Panelist at invited developer talk hosted by Jonathan Gottfried (Major League Hacking).

NYU GAME INNOVATION LAB | PART-TIME RESEARCHER 2013-2014 | New York, NY
Designed and implemented projection mapping and computer vision solution presented at Eyebeam at the Computational Fashion Exhibition which implemented "The Lightning Bug Game" by Artist Kaho Abe. Designed and implemented novel "3d drawing" experience presented at public event at Game Lab.

FESTIVAL OF COLORS: HOLI NYC | EXECUTIVE PRODUCER 2012-Present | New York, NY

Oversee all aspects of 5000+ person single day outdoor music and art festival. Lead core planning team of 3-5 & staff of 40+ on the day of event. Contract all vendors / contractors + work with local govt' and ensure event goes smoothly and brings a unique experience to the public.

INDEPENDENT | TECH DIRECTOR/CONSULTANT 2012-Present | New York, NY

Madison Square Garden (Baby Face – Assistant Producer), Apostrophe Gallery @ MANA Contemporary (Tech Director), responsible for implementing technical solutions to artists' visions; overseeing logistics/setup/production; interfacing between management, MSG staff/admin, artists, etc..