

# MICHAEL PSENKA

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## EDUCATION

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<b>UC Berkeley</b> , <i>PhD</i> in Electrical Engineering and Computer Science	Aug 2021 – present
GPA: 4.0/4.0 major, 3.95 overall. Stand-in prof. for discrete math & probability (CS 70), TA robotics (EECS 106B).	
<b>Princeton University</b> , <i>B.A.</i> in Mathematics (minors: CS, Applied Math)	Aug 2017 – May 2021
GPA: 3.6/4.0. <i>Department awards</i> : Greenberg Memorial Prize (mathematics, solved open problem), Manfred Pyka Memorial Prize (physics). HackPrinceton 1st place.	

## WORK EXPERIENCE

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<b>Research Scientist Intern w/ Yann LeCun @ Meta</b>	May – Dec 2025
• Planning and reasoning for world models. Created new SOTA planner, scales to modern video world models.	
<b>Co-head Instructor @ UC Berkeley</b>	Jun – Aug 2022
• Organized and taught an undergraduate course on discrete math and probability theory. <a href="#">Link to class page</a> .	
<b>Undergraduate Researcher @ Stanford University</b>	Jun – Aug 2020
• Worked with Dr. Tolga Birdal on a novel approach to multi-view reconstruction in computer vision.	
• Developed method bypassed pairwise view registration through direct global structure estimation.	
<b>Undergraduate Researcher @ Princeton University</b>	Jun – Sept 2019
• With Prof. Nicolas Boumal, developed a SOTA method for handling curvature for second-order optimization over tensor train manifolds.	
<b>Machine Learning &amp; AI Engineer @ Moovila, Inc.</b>	Jan – May 2025, Jun – Aug 2018, '17, '16
<i>Selected contributions:</i>	
• Co-inventor on a patent for proprietary software, mathematical modeling for visualizing large-scale connections. Remains a core component of the primary software delivered to all customers.	
• Helped develop a custom integrated LLM chatbot and tooling for increased functionality and ease of use.	

## SELECTED PUBLICATIONS

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S. Raja\*, M. Šípka\*, **M. Psenka\***, T. Kreiman, M. Pavelka, and A. S. Krishnapriyan (2025). “Action-Minimization Meets Generative Modeling: Efficient Transition Path Sampling with the Onsager-Machlup Functional”. *ICML 2025*. [Link to paper](#).

**M. Psenka\***, A. Escontrela\*, P. Abbeel, and Y. Ma (2024). “Learning a Diffusion Model Policy from Rewards via Q-Score Matching”. *ICML 2024*. [Link to paper](#).

**M. Psenka**, D. Pai, V. Raman, S. Sastry, and Y. Ma (2024). “Representation Learning through Manifold Flattening and Reconstruction”. *JMLR*. [Link to paper](#).

R. Arbon\*, M. Mannan\*, **M. Psenka\***, and S. Ragavan\* (2022). “A Proof of The Triangular Ashbaugh-Benguria-Payne-Pólya-Weinberger Inequality”. *Journal of Spectral Theory*. [Link to paper](#).

## SKILLS

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**Programming** Python (pytorch, JAX, numpy), C#, C, MATLAB, Java, HTML/CSS, JavaScript  
**Misc.** Linux, Shell,  $\text{\LaTeX}$ , Git, AWS

## INTERESTS

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Piano, snowboarding, boxing, skateboarding, pole vaulting, music production, chess, mac and cheese, whiskey