ALEKSEY VALOUEV

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EDUCATION

University of California, Berkeley *August 2025 - May 2028*
B.S. in Electrical Engineering & Computer Science; GPA: 4.0/4.0
Member, Machine Learning @ Berkeley
Relevant Coursework: Data Structures & Algorithms, Computer Architecture, Signal Processing

EXPERIENCE

Berkeley AI Research Lab (BAIR) October 2025 - Present
Researcher *Berkeley, CA*

- Developing foundation computer vision models for fine-grained object detection in satellite imagery. Using multi-view vision transformers to jointly infer scene geometry and perform object detection.
- Supervised by Dr. Ritwik Gupta in the Darrell Computer Vision Group.

Machine Learning at Berkeley September 2025 - Present
Machine Learning Engineer *Berkeley, CA*

- Trained a vision language action (VLA) model to autonomously pilot a lunar lander in an OpenAI gym environment.

Boston University Computational Imaging Systems Lab July 2024 - August 2024
Research Intern *Boston, MA*

- Combined 3-D scene representation (NeRF) with Fourier optics to pioneer a versatile and adaptive approach to extended depth microscopy. Developed a lightweight and versatile tool for miniaturized imaging of live rodent brains.
- First-author publication in IEEE (https://ieeexplore.ieee.org/document/10959478).

University of Southern California, Marshall School of Business May 2022 - June 2024
Research Assistant *Los Angeles, CA*

- Aggregated, preprocessed, and analyzed short seller tweets and corporate disclosures to predict short squeeze attacks.
- Performed textual analysis of published papers using NLP techniques. Presented results at the USC CETAFE Conference.
- Acknowledged in a journal publication (https://dx.doi.org/10.2139/ssrn.3849581).

PROJECTS AND LEADERSHIP

Machine Learning for Wildfire Prediction September 2021 - December 2022

- Acquired and processed satellite and sensor data using Geographic Information System (GIS) tools, Pandas, and Numpy.
- Used logistic regression and random forest models with time series data to predict monthly wildfire risk at 5 kilometer resolution.

AI-Powered Network of Sensors for Real-Time Wildfire Detection January 2023 - June 2025

- Created a novel Intelligent Wireless Sensing Network (IWSN) for real-time wildfire detection using CV on IoT devices.
- Provisional patent for the IWSN registered with the US Patent Office. Worked on deployment in the Santa Cruz Mountains.

SKILLS AND VOLUNTEERING

Technical Python, Java, PyTorch, Matplotlib, Yahoo Finance API, Stanford Named Entity Recognizer, NLP
Volunteering Supervisor at Palo Alto High School robotics summer camp. Outreach with National Geographic.
Linkedin https://www.linkedin.com/in/aleksey-valouev/