

ALEKSEY VALOUEV

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EDUCATION

University of California, Berkeley
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

August 2025 - May 2027

EXPERIENCE

Berkeley AI Research Lab (BAIR)
Researcher

October 2025 - Present
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.

Boston University Computational Imaging Systems Lab
Research Intern

July 2024 - August 2024
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
Research Assistant

May 2022 - June 2024
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
Volunteering
Linkedin

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