

Frederik Ebert

Research Scientist / Engineer —
Robotics Foundation Models

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📄 [febert.github.io](https://github.com/febert)

Founder and Lead Scientist of Emancro Robotics Corp.

08/2022 - 12/2025 **Emancro Robotics**, *Development of AI-Powered, General-Purpose Hospital Logistics Robot*, Berkeley, CA.

- Raised **\$4.2M** across pre-seed and seed from investors including Khosla Ventures, Amplify Partners and others
- Led development and validation of vision-language action (VLA) model for hospital logistics tasks, extending it to support robot hands.
- Designed and scaled data pipelines for imitation learning to handle 20k+ demonstrations per week.
- Devised novel data collection technique for large-scale demonstration collection using handheld-suction tool.
- Robot achieved 180 items/h speed for end-to-end task of medication cabinet inventory and restocking, including item handling, barcode scanning
- Piloted robot at Mayo Clinic, presented at ASHP trade show giving live-robot demonstrations.

Education

2017 – 2022 **PhD in Computer Science**, *Berkeley Artificial Intelligence Research (BAIR), UC Berkeley*, Advisors: Prof. Sergey Levine and Prof. Chelsea Finn.

2016 – 2017 **Visiting Researcher**, *Berkeley Artificial Intelligence Research (BAIR), UC Berkeley*, Advisor: Prof. Sergey Levine.

2014 – 2016 **Master Program**, *Robotics Cognition Intelligence*, Technical University Munich.

2010 – 2014 **Bachelor of Science**, *Mechatronics Engineering and Information Technology*, Technical University Munich.

2012 – 2013 **Exchange Student**, *Tongji-University, Shanghai, China*, 2 semesters.

Publications

RSS 2023 **Pre-Training for Robots: Offline RL on Diverse Data Supports Flexible and Efficient Fine-Tuning**, *Robotics: Science and Systems 2023*, Aviral Kumar*, Anikait Singh*, **Frederik Ebert***, Mitsuhiro Nakamoto, Yanlai Yang, Chelsea Finn, Sergey Levine (* equal contribution).

RSS 2022 **Bridge Data: Boosting Generalization of Robotic Skills with Cross-Domain Dataset**, *Robotics: Science and Systems*, **Frederik Ebert***, Yanlai Yang*, Karl Schmeckpeper, Bernadette Bucher, Georgios Georgakis, Chelsea Finn, Sergey Levine.

- Neurips 2021 **Long-Horizon Visual Planning with Goal-Conditioned Hierarchical Predictors**, *Thirty-fifth Annual Conference on Neural Information Processing Systems*.
- ICRA 2020 **OmniTact: A Multi-Directional High Resolution Touch Sensor**, *IEEE International Conference on Robotics and Automation 2020*.
- CoRL 2019 **RoboNet: Large-Scale Multi-Robot Learning**, *Conference on Robot Learning 2019*.
- ICLR 2019 **Time-Agnostic Prediction: Predicting Predictable Video Frames**, *International Conference on Learning Representations 2019*.
- RSS 2019 **Improvisation through Physical Understanding: Using Novel Objects as Tools with Visual Foresight**, *Robotics: Science and Systems 2019*.
- ICRA 2019 **Manipulation by Feel: Touch-Based Control with Deep Predictive Models**, *IEEE International Conference on Robotics and Automation 2019*, Stephen Tian*, **Frederik Ebert***, Dinesh Jayaraman, Mayur Mudigonda, Chelsea Finn, Roberto Calandra, Sergey Levine (* equal contribution).
- CoRL 2018 **Robustness via Retrying: Closed-Loop Robotic Manipulation with Self-Supervised Learning**, *Conference on Robot Learning 2018*, **Frederik Ebert**, Sudeep Dasari, Alex Lee, Sergey Levine, Chelsea Finn.
- CoRL 2017 **Self-Supervised Visual Planning with Temporal Skip Connections**, *Conference on Robot Learning 2017*, **Frederik Ebert**, Chelsea Finn, Alex Lee, Sergey Levine.

Mentoring

Undergraduates **Sudeep Dasari, Stephen Tian, Akhil Padmanabha, Annie Xie.**

Press Coverage

- 2019 Learning to manipulate objects based on the sense of touch (second half) [Venture Beat](#).
2018 Researchers train robots to see into the future [TechCrunch](#).

Internships

- 2020 **Google Inc.**, *Google Robotics*, Mountain View, CA, United States.
◦ Developing algorithms for vision-based robotic manipulation based on deep reinforcement learning.

Key Technical Skills

- Languages **Python, C/C++, Matlab, Java.**
Frameworks **PyTorch, JAX, TensorFlow, ROS.**
Platforms **Linux.**