

Maxime Kawawa-Beaudan

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| EDUCATION | University of California, Berkeley , Berkeley, CA <i>B.A. in Computer Science, Minor in Creative Writing, GPA: 3.88/4.00</i> <ul style="list-style-type: none">Coursework: Machine Learning, AI, Probability Theory, Efficient Algorithms, Convex Optimization, Robotics, Computer Architecture, Data Structures, Linear Algebra | Aug. 2017 - Dec. 2020 |
| PROFESSIONAL EXPERIENCE | Berkeley Artificial Intelligence Research (BAIR) , Berkeley, CA <i>Researcher</i> <ul style="list-style-type: none">Investigating deep learning methods for image compression in the Video and Image Processing Lab. Building hierarchical autoencoders with PyTorch and training end-to-end on AWS to jointly optimize for recognition, distortion, and compression performance. Contributed 98% of lines of code in repository.First author on manuscript in review. Additionally authored a proposal for a Sony Focused Research Award, aggregating preliminary results in a bid for up to \$150,000 in funding. Salesforce, Inc. , San Francisco, CA <i>Software Developer Intern</i> <ul style="list-style-type: none">Researched scalable anomaly detection algorithms with the data science team for Salesforce's AI group, Einstein. Developed a novel approach for streaming data to identify actionable irregularities; used Scala and Spark on AWS clusters. Proposed method helped team launch the Messaging Insights feature, used by thousands of marketers worldwide. Dahlia Lights , Millbrae, CA (acquired) <i>Software Developer Intern</i> <ul style="list-style-type: none">Worked as fifth employee at a startup developing AI-powered home control systems. Designed and built entire back end for automated data collection and user habit analysis. | Apr. 2020 - Present Jun. 2019 - Aug. 2019 May 2018 - Aug. 2018 |
| PUBLICATIONS | Recognition-Aware Learned Image Compression <i>Maxime Kawawa-Beaudan, Ryan Roggenkemper, Avideh Zakhor.</i> <ul style="list-style-type: none">We jointly learn compression and recognition networks to optimize a rate-distortion loss alongside a task-specific loss. We achieve as much as 26% higher recognition accuracy at equivalent bitrates compared to state-of-the-art traditional compression method. <u>Pre-print.</u> | Under Review at ICIP 2021 |
| PROJECTS | bobROSS , EECS C106A <i>Final project for upper-division robotics: Bots Overcoming Boundaries (with) ROS Support.</i> <ul style="list-style-type: none">Shared robotic simulation space in augmented reality. Project website here. Suture Thread Tracking System , AUTOLab <i>Initial research experience with DaVinci surgical robots in BAIR's Automation Lab.</i> <ul style="list-style-type: none">System to segment and model thin surgical threads in images of robotic workspace. | Oct. 2020 - Dec. 2020 Feb. 2019 |
| ACTIVITIES | Published Author , (Self-Directed) <i>Author of 50+ short stories</i> <ul style="list-style-type: none">Published the short story "Waiting for Fireworks" in <i>Glimmer Train</i> literary journal (publishes 40 stories out of 40,000+ submissions per year) as first place contest winner. Published the accompanying essay "A Constitution for a Young Artist" in the same issue (Fall 2018).Finalist in the National YoungArts Foundation talent contest (2017). Studied in master classes from renowned authors. Awarded a \$3,000 merit-based grant to fund further work.Finalist in <i>New Millenium Writings</i> Writing Awards 42 (2016). Peer Tutor , CS 370 <i>One-on-one instructor with Berkeley pedagogy course, Intro. to Teaching Computer Science.</i> <ul style="list-style-type: none">Taught 20+ students enrolled in CS61A (computer programs) and CS61B (data structures). | Aug. 2014 - Present Aug. 2018 - Dec. 2018 |
| SKILLS | Languages: Python, Java, Scala, C; Platforms: AWS, Google Cloud; Frameworks: Apache Spark, PyTorch; Tools: NumPy, Pandas, OpenCV, matplotlib, Jupyter notebooks, Unix Natural Languages: English (native), French (fluent) | |