CHRIS POWERS

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Education

M.S. Electrical Engineering and Computer Science AUG 2019 - MAY 2020
University of California, Berkeley GPA: 4.00

B.S. Electrical Engineering and Computer Science AUG 2015 - MAY 2019
University of California, Berkeley | *High Honors, EECS Honor Society* GPA: 3.91

Experience

COBALT ROBOTICS | MACHINE LEARNING ENGINEER MAR 2021 - CURRENT

- Designed and optimized a tracking system for filtering duplicates, reducing human operator work by 25%.
- Automated detection of security risks, such as open doors, using unsupervised learning and edge detection.
- Built an image labeling and statistical aggregation pipeline that enables fast, data-driven improvements.

STEALTH STARTUP | MACHINE LEARNING SYSTEMS LEAD JAN 2020 - JAN 2021

- Designed microservice architecture for our end-to-end learning pipeline, including model training and deployment. Used MongoDB, Amazon S3, and Redis for storage, and GRPC and HTTP for communication.
- Created a real-time analytics dashboard for users to monitor their ML model using React/Redux.

YELP | SOFTWARE ENGINEERING INTERN MAY 2018 - AUG 2018

- Improved the experience of thousands of advertising Yelp business users by streamlining frontend flows.

Research

BERKELEY DEEP DRIVE | RESEARCH ASSISTANT SEP 2018 - MAY 2020

- Led four undergraduates to revamp open source image annotation tool Scalabel, adding real time collaboration between users and interactive model-assisted labeling with PolygonRNN++.

UC BERKELEY AUTOMATION LAB | RESEARCH ASSISTANT JUN 2016 - MAY 2018

- Developed robotic decluttering algorithm, first segmenting objects in a pile then using PCA to identify the optimal push trajectory. Came in 1st in TRI hackathon and 2nd in the Siemens FutureMakers Challenge.

Projects

SNOWSIM | C++ SPRING 2020

- Implemented a realistic and performant snow simulation and visualization using the material point method

REINFORCEMENT LEARNING FOR DISTRIBUTED SCHEDULING | NumPy, SciPy FALL 2019

- Used parameter estimation on real world server logs to create a realistic distribution of incoming jobs.
- Combined policy gradient and actor critic with a DAgger baseline to beat the Shortest Job First heuristic.

DEEP ANIME COLORIZATION | Tensorflow, Keras SPRING 2019

- Trained Pix2Pix conditional GAN (cGAN) to colorize grayscale images in a manner consistent with their original show, then applied transfer learning to colorize images in the style of different shows.

PIANO PLAYING ROBOT | OpenCV, ROS FALL 2018

- Used computer vision algorithms to compute 3D poses of piano keys from a 2D camera image of the piano.

Skills

Languages: Python, Typescript, C, C++, Java, Golang, Unix scripting, HTML/CSS
Tools: Tensorflow, Keras, PyTorch, OpenCV, React, Redux, Node.js, Django, MongoDB, GRPC, Redis, AWS, Docker
Selected Coursework: Deep RL, Deep NN, ML, AI, Adv. Probability, Optimization, Algorithms, Robotics, Analysis