

# Yuval Epstain Ofek

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## Education

### The Cooper Union for the Advancement of Science and Art

M.E. IN ELECTRICAL ENGINEERING

New York, NY

Sep. 2019 - May. 2022

- Graduate G.P.A. 4.0/4.0
- Selected Courses: Natural Language Processing, Digital Image Processing, Frequentist Machine Learning

### The Cooper Union for the Advancement of Science and Art

B.E. IN ELECTRICAL ENGINEERING, MINOR IN COMPUTER SCIENCE

New York, NY

Sep. 2017 - May. 2021

- Cumulative G.P.A. 3.9/4.0, Major G.P.A 4.0/4.0

## Skills

<b>Software</b>	Python, MATLAB, Bash, C/C++, Verilog, HTML/CSS, Git, Linux, $\LaTeX$
<b>Frameworks</b>	TensorFlow, Scikit-learn, Pandas, OpenCV, Scikit-image, Numpy, GDAL, Rasterio
<b>Languages</b>	English, Hebrew

## Work Experience

### Upcycles Transit Inc.

Brooklyn, NY

VEHICLE ENERGY SYSTEMS RESEARCHER

Jun. 2020 - Aug. 2020

- Deployed a logging and parsing system which centralizes telemetry data from the company's tricycle fleet
- Performed a life-cycle emissions analysis on the company's tricycles using the Argonne GREET Model
- Compiled and documented past research conducted on small electric vehicle emissions, space consumption, and last mile deliveries

### Sinai BioDesign - Mount Sinai Hospital

New York, NY

ELECTRICAL ENGINEERING INTERN

Feb. 2020 - Jun. 2020

- Performed hardware and quality assurance testing on PCBs and electric components using a variety of lab equipment
- Conducted numerical simulations to determine component specifications

### Microsystems Technology Labs - MIT

Cambridge, MA

NON-MIT STUDENT WORKER

Jul. 2019 - Aug. 2019

- Implemented and adapted non-differentiable optimization algorithms using MATLAB
- Collected and cleaned incoming sensor data for future processing
- Conducted microelectronics research with MTL's "Xtreme" Transistor Group under Dr. Alon Vardy and Dr. Jesús del Alamo

## Project Work

### DanceMuse: Inspiring Choreography Through AI

Sep. 2020 - Present

- Co-developing a deep learning based system to make music-to-dance research more accessible to choreographers and dancers
- Creating a command-line tool to pipeline and multi-thread pre-processing and testing operations, reducing manual operations by 90%
- Deploying trained deep learning models on self created publicly available website

### Remote Sensing and Earth Observation

Jan. 2021 - Present

- Designing and modeling a TensorFlow based yield-prediction system to find areas best suited for growing crops
- Deploying a land-cover classification model (TensorFlow) trained on data stored in Google Cloud
- Manipulated GeoTIFF and GeoJSON using GDAL and generated GeoTIFF composite images

### Fallback - A System to Report Accidents for Seniors Living Alone

Jul. 2018 - Aug. 2018

- Co-invented a Raspberry Pi based at-home accident reporting system that uses computer vision and hotword detection
- Presented prototype and design progress weekly to engineers, patent lawyers, and venture capitalists

## Honors & Awards

2021	<b>Jesse Sherman Book Award</b> , Albert Nerken School of Engineering Awards	New York, NY
2020+	<b>Tau Beta Pi Engineering Honor Society Membership</b> , Top 1/8th of the junior class	New York, NY
2019	<b>Semifinalist</b> , SASEtank entrepreneurial competition	Denver, CO
2018	<b>2nd Place</b> , Invention Factory	New York, NY
2017-2021	<b>Half-Tuition Scholarship</b> , The Cooper Union for the Advancement of Science and Art	New York, NY