

Luke Lloyd Longren

Info

ADDRESS

██████████
10178 Berlin, BE, DE

PHONE

EMAIL
lukelongren
@gmail.com

WEBSITE

nocu.be

Skills

PROGRAMMING

Proficient

Python, R, TeX

Familiar

C++, MATLAB,

HTML/CSS

LANGUAGES

Native

English

Conservant

German

OTHER

Private Pilot (FAA)

Education

MSC, COMPUTATIONAL NEUROSCIENCE

OCT. 2019 – MAR. 2022

Bernstein Center for Computational Neuroscience

| Berlin, BE, DE

| Thesis: Automatic Segmentation of Elephant Trunk Muscles

BSc, PHYSICS

AUG. 2015 – MAY 2019

Fort Hays State University

| Hays, KS, USA

| Kansas Academy of Mathematics and Science
Minor, Mathematics

HIGH SCHOOL

AUG. 2013 – MAY 2015

Free State High School

| Lawrence, KS, USA

Research

SEMINAR PAPER

APR. 2021 – PRESENT

Hot Topics in Computer Vision - Technical University of Berlin

| Berlin, BE, DE

| Currently working on a publication of research inspecting how both single- and super-pixel noise impacts machine learning approaches for urban layout classification [1].

MSC THESIS

JUL. 2021 – MAR. 2022

Lab of Michael Brecht - Humboldt University of Berlin

| Berlin, BE, DE

| *Department of Animal Physiology / Systems Neurobiology and Neural Computation.*
Automatic methods of muscle segmentation was investigated further. Imaging with μ CT of elephant trunk was conducted. Then, the method implemented a basic deformable model with a vector field as the main external force, calculated from the edge map.

LAB ROTATION

MAR. 2021 – MAY 2021

Lab of Michael Brecht - Humboldt University of Berlin

| Berlin, BE, DE

| *Department of Animal Physiology / Systems Neurobiology and Neural Computation.*
Using a μ CT scan of an elephant's trunk, automated segmentation of individual muscles is attempted. The methods used include: histogram equalization, distance transformations, cross-correlation subtraction, and both watershed/contour-tree segmentation.

LAB ROTATION

JAN. 2021 – FEB. 2021

Lab of Soyoung Park - German Institute of Human Nutrition

| Potsdam, BB, DE

| *Department of Decision Neuroscience and Nutrition.*
As part of a visual food cue study, where participants observed images of food before and after a meal, heart rate and respiratory data was analysed. The results from the lab rotation were included in a publication [2].

LAB ROTATION

OCT. 2020 – DEC. 2021

Lab of Pawel Romanczuk - Humboldt University of Berlin

| Berlin, BE, DE

| *Collective Information Processing, Institute for Theoretical Biology.*
Artificial swarms on a uniform grid were generated and simulation of the visual field for each individual unit was conducted. The structure of collective visual networks was then analysed for varied density and order parameters.

Employment History

VISITING SCHOLAR

JUL. 2021 – PRESENT

Humboldt University of Berlin

| Berlin, BE, DE

| Currently continuing the work of my thesis as a guest researcher, see description above.

RESEARCH ASSISTANT	NOV. 2020 – SEP. 2021
DIfE - Decision Neuroscience and Nutrition	Potsdam, BB, DE
Performed analysis on experimental data stemming from the biological reaction to various nutritional stimuli. Specifically, led a project to inspect statistically the diurnal response of amino acid levels in blood plasma to differing food composition.	
CROSS UTILIZED AGENT	OCT. 2017 – JUL. 2019
SkyWest Airlines	Hays, KS, USA
Handled regional airline flights for United Express as a ramp, ticket, and gate agent. Had a broad range of responsibilities, including loading/unloading of luggage and cargo, servicing and marshalling of aircraft, customer service, and communication with flight crews. The position involved a thorough attention to detail and knowledge of policies and procedures.	
LANDSCAPE WORKER	MAY 2017 – AUG. 2017
University of Kansas	Lawrence, KS, USA
Maintained the university grounds full-time during the summer months. Mainly worked on a team using string trimmers and covered the entire campus. Additionally, serviced the mowing equipment and picked up litter.	
FRONT DESK ASSISTANT	JAN. 2016 – DEC. 2016
Fort Hays State University	Hays, KS, USA
CUSTODIAN	MAY 2016 – AUG. 2016
Fort Hays State University	Hays, KS, USA
SOCCER REFEREE	MAR. 2014 – JUL. 2015
Sporting Kaw Valley	Lawrence, KS, USA

Experience

GLIDING CLUB MEMBER	OCT. 2021 – PRESENT
Luftsportclub Kranich Berlin	Neuruppin, BB, DE
Participate in the gliding operation, conducted in the German language, as a student pilot. As well, assist with the towing and launching of the glider for other club members.	
THEATER ELECTRICIAN	JAN. 2016 – MAY 2019
Fort Hays State University	Hays, KS, USA
Led the light placement and wiring for the university theater program, including hanging and adding filters to lights. Ran the lightboard during each show as well.	
PHYSICS & ASTRONOMY CLUB MEMBER	AUG. 2016 – MAY 2019
Fort Hays State University	Hays, KS, USA
Organized public outreach programs between the university and the public to encourage motivation in the sciences for younger students.	
MARCHING BAND DRUMLINE MEMBER	AUG. 2016 – MAY 2018
Fort Hays State University	Hays, KS, USA
Played bass drum on the drumline of the university marching band during American football games and parades. Additionally, participated in concert band as a bassoonist.	
ROBOTICS TEAM MEMBER & VOLUNTEER	JAN. 2014 – MAR. 2017
FIRST Robotics	Lawrence, KS, USA
Took part in the robotics team, where a robot was built each year to compete in challenge tasks against other schools. Volunteered with the program as well while in college.	

Publications

- [1] **L. Longren**, P. Wei, and R. Hänsch, "The Influence of Label Noise on Training and Evaluating Machine Learning Approaches", *IEEE JSTARS*, working draft.
- [2] I. Rebollo, M. Schmidt, **L. Longren**, and S. Park, "Influence of visual food cues on autonomic activity and craving", *Biological Psychology*, vol. 165, p. 108197, 2021.