

# TITUS LUNGU

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Los Angeles, California U.S. Citizen

## EDUCATION

**UCLA** M.S. MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE  
Sept 2016 - June 2017 / Los Angeles, CA

**UDACITY** ARTIFICIAL INTELLIGENCE NANODEGREE / 2017

**UDACITY** DEEP LEARNING FOUNDATIONS NANODEGREE / 2017

**CLEVELAND STATE UNIV. (CSU)** B.S. MECHANICAL ENGINEERING  
Aug 2012 - May 2016 / Cleveland, OH

- GPA: 3.90; Summa c. Laude; Honors Diploma
- Tau Beta Pi Engineering Honors Society

## EXPERIENCE

**CENTER FOR VISION, COGNITION, LEARNING, AND AUTONOMY**  
ROBOTICS CONTROL / Sept 2016 - Present / UCLA

- Investigated control methods to optimize robot velocity/torque.
- Tested robot's force/torque sensors to ensure accurate readings.
- Learned ROS to control Rethink Robotics Baxter robot.

**MECHANICS AND CONTROL OF LIVING SYSTEMS LABORATORY**  
MACHINE LEARNING / May 2015 - July 2016 / CSU

- Designed and built robot, and used it to test machine learning algorithms for motion control.
- Implemented tactile feedback to teach the robot new motions.
- Updated arm simulation code to allow force guided manipulation.

## SENIOR DESIGN CAPSTONE PROJECT

ACTIVE SURVEILLANCE AS A SERVICE / Aug 2015- May 2016 / CSU

- Implemented live pedestrian tracking surveillance software in the C#/.NET environment using computer vision and machine learning.

## BIOLOGICALLY INSPIRED ROBOTICS LABORATORY

ROBOT SIMULATION / June 2015 - Aug 2015 / Case Western Reserve

- Analyzed robotic simulation packages to use in the lab.
- Compiled comprehensive operating instructions for Gazebo.

**MECHANICS AND CONTROL OF LIVING SYSTEMS LABORATORY**  
BIOMECHANICS / Dec 2014 - May 2015 / CSU

- Worked on initial research to automate design of simulation-informed prosthetic sockets for lower limb amputees.
- Iterative analysis and MRI-based growth segmentation.

## SWAGELOK

DESIGN ENGINEER INTERN / Summer 2014 / Solon, OH

- Optimized CNC tool chain layout to save \$40,000 annually.
- Designed, analyzed, and tested high pressure valve fitting.
- Revised 130 CNC programs and redesigned 500 assembly tools.

## PARKER HANNIFIN

DESIGN ENGINEER INTERN / Fall 2013 / Elyria, OH

- Prepared material corrosion reports for sub-sea drilling customers.
- Lab testing and inspection of materials and parts.
- Found appropriate replacement for obsolete products.

## CRISTAL

RELIABILITY ENGINEER CO-OP / Summer 2013 / Ashtabula, OH

- Revised pipe circuit drawings to increase inspection efficiency.
- Inspected equipment and prepared reports for administration.
- Cataloged critical plant equipment in company safety initiative.

## SKILLS

**COMPUTER:** C++, C#, HTML5, CSS, Python, MATLAB, Arduino, Linux, ROS, SolidWorks, Autodesk Inventor, Visual Studio, SAP.

**MANUFACTURING:** 3D printing, lathe, mill, CNC coding.

**LANGUAGES:** English, Romanian, French.

## PAPERS AND PRESENTATIONS

**HONORS THESIS / May 2016**

Using Tactile Feedback and Gaussian Process Regression in a Dynamic System to Learn New Motions

**THE DOWNTOWN REVIEW, UNIVERSITY JOURNAL / Apr 2015**

Walking Simulator Mechanism - Developed a device to reproduce the motion and ground reaction forces of the human foot.

**THE 9TH ANNUAL CLEVELAND STATE INTERDISCIPLINARY RESEARCH CONFERENCE / Nov 2015**

Learning Inverse Dynamics with Gaussian Process Regression

**HIGH SCHOOL PRESENTATION, FALL VISIT DAY / Oct 2015**

Robots, Prosthetics, and Artificial Intelligence

## LEADERSHIP

**HONORS COLLEGE STUDENT REPRESENTATIVE**

Mar 2015 - May 2016 / CSU

- Keynote speaker at college dedication ceremony.
- Representative to Board of Trustees and dean search committee.

**ENGINEERING COLLEGE STUDENT REPRESENTATIVE**

Sept 2015 - May 2016 / CSU

- Leadership Planning Team for design of new engineering building.
- Worked with corporate executives to design sponsored lab.
- Representative to the Ohio Congress at Inter-University Council.

**ASME PRESIDENT AND TREASURER**

Jan 2013 - Jan 2015 / CSU

- Led robotics team in creation of hexapod robot, and catapult team.
- Partnered with local start-up to raise money for robotics project.

**YOUTH GROUP COMMITTEE SECRETARY**

Apr 2010 - May 2014 / Cleveland Romanian Church

- Partook in two humanitarian aid trips to Romanian countryside.
- Planned local and national events and concerts at ethnic church.

## HONORS

**NATIONAL SCIENCE FOUNDATION GRADUATE RESEARCH FELLOWSHIP**

Mar 2016

Honorable mention for excellent research proposal.

**1ST PLACE SENIOR DESIGN CAPSTONE PROJECT**

May 2016 / CSU

Interdisciplinary team, placed first out of over 60 teams (\$1,000).

**OUTSTANDING MECHANICAL ENGINEERING AWARD**

May 2016 / CSU

Highest GPA from mechanical engineering class.

**UNDERGRADUATE RESEARCH GRANT**

May 2016 / CSU

\$1,000 stipend for machine learning research proposal.

**PRESIDENT'S AWARD FOR EXCELLENCE IN DIVERSITY**

Apr 2015 / CSU

Received in collaboration with the engineering Dean's Diversity Council for taking inclusion and mentorship initiatives.

**HONORS COLLEGE SCHOLARSHIP**

Aug 2012 - May 2016 / CSU

Full tuition, four year scholarship (\$40,000) based on strong academic record and personal statement.