

# ALEXANDER LALEJINI

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## EDUCATION

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### **Mississippi State University**

*August 2011 - Present*

Degree: B.S. degree in Computer Science  
Expected Graduation: May 2015  
GPA: 4.0

## RESEARCH EXPERIENCE

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### **Laboratory for Autonomous Systems Research (LASR)**

*May 2014 - Present*

*Naval Research Laboratory - NREIP Intern*

*Washington, D.C.*

- Mentors/Supervisors: Dr. Greg Trafton, Dr. Laura Hiatt
- Summer 2014 undergraduate research position at LASR. Conducted research related to the use of dynamic context produced by a computational cognitive model to improve a neural network-based object recognition system.

### **Center for Advanced Vehicular Systems (CAVS)**

*January 2014 - Present*

*Mississippi State University - Undergraduate Research Assistant*

*Starkville, MS*

- Mentors: Dr. Daniel Carruth, Dr. Cindy L. Bethel
- Conducted ITAR-restricted research on the CRES-GV project. This project involved the development of software to integrate robotic platforms in a vehicle simulation software package.

### **Social, Therapeutic, & Robotic Systems (STaRS) Laboratory**

*August 2013 - Present*

*Mississippi State University - Undergraduate Research Assistant*

*Mississippi State, MS*

- Mentor/Supervisor: Dr. Cindy L. Bethel
- Performed research and served as Co-Lead of the Robot Intent and Control Project sponsored by the Army Research Laboratory. The project involved the development of a system that allowed supervisory command and control of an autonomous robot platform through the use of three different interfaces. The system was evaluated in a user study that measured the usability and user experience of each interface.

### **Mississippi State University Physics Department**

*Fall 2011 - Spring 2012*

*Undergraduate Research Assistant*

*Mississippi State, MS*

- Supervisor: Dr. Angelle Tanner
- Developed multiple data analysis and image processing scripts primarily for data collected at the Palomar Observatory.

## EMPLOYMENT

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### **Jet Propulsion Laboratory (JPL)**

*Summer 2012*

*USRP Intern*

*Pasadena, CA*

- Supervisor: William R. Johnson
- Provided Earth Science software support; developed a radiometer calibration application using Enthought Python. This application coordinated the automation of multiple calibration instruments via serial communication and provided the user with real-time data visualization from the calibration process.

**Naval Research Laboratory (NRL)**  
*Computer Clerk (2011), SEAP Intern (2010, 2009)*

Summers of 2011, 2010, 2009  
*John C. Stennis Space Center, Mississippi*

- Supervisor: Dr. Bruce Lin
- Assisted with the development of a battlespace management interface written using the World Wind Java SDK. Implemented a clustering algorithm for use in the classification of sparse data points.

## TECHNICAL SKILLS

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<b>Computer Languages</b>	Python, C/C++, Java
<b>Software Tools &amp; Libraries</b>	Robot Operating System (ROS), Enthought Python, Scipy, Numpy
<b>Version Control</b>	GIT
<b>Robots</b>	Kobuki TurtleBot 2, Dr. Robot Jaguar
<b>Web</b>	PHP, HTML/CSS, SQL
<b>Operating Systems</b>	Linux, Windows, Mac OS

## AWARDS AND HONORS

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- President's Scholar (Fall 2011 - Present)
- Meritorious Award in Bagley Undergraduate Research Poster Competition (Poster title: Robot Control)
- Shackouls Honors College

## SERVICE

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**SWAT Training Participant** November 2013 - Present  
*Mississippi State University*

- Volunteer in monthly training exercises with the Starkville City Police Department SWAT team and the STaRS Laboratory related to the integration of robots with tactical teams.

**National SeaPerch Challenge Volunteer** May 2014  
*Hattiesburg, MS*

- Poolside judge for the Heist Challenge.