

# Slesa Adhikari

## Software Developer

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## Skills

Languages: Python, C/C++, Javascript, C#

Graphics Programming with **OpenGL**

Image Processing/ CV using **OpenCV**

**Scikit, Numpy, Scipy**

**ReactJS, jQuery, Sass**

**LaTeX, Bash Scripting, Git, Linux**

**Scrum/Agile methodologies, JIRA**

## Education

### Master's in Computer Science, GPA 3.875

University of Alabama in Huntsville

2018-2020

Graduate Research Assistantship

AAUW International Master's Degree Fellowship

AAUW International Master's Degree Completion Fellowship

**Thesis:** *Detecting Periodic Action Patterns in Videos*

### Bachelor's in Computer Engineering, 78.6%

Institute of Engineering, Pulchowk Campus

2012-2016

Full merit based undergraduate scholarship

Ncell Excellence Award, Ncell Pvt. Ltd.

Ncell Scholarship Award, Ncell Pvt. Ltd.

Graduated top 10 among 700 students

## Experience

### Computer Scientist

NASA-IMPACT | UAH

June 2020 - Present

Web visualization

UI/UX design

Cloud Computing

Javascript  
Python, Numpy,  
AWS, Lambda,  
HTML, CSS

### Graduate Research Assistant

Global Hydrology Resource Center |

NASA/UAH

May 2019 - May 2020

Data processing (python, numpy, zarr, xarray) of various earth science datasets

Optimized rendering speed of 3D web visualization of those large datasets

Created a user palatable interface and experience

Created RESTful APIs and deployed serverless

framework to AWS Lambda using Terraform

Cesium,  
Javascript  
Python, Numpy,  
Zarr, Xarray,  
AWS, Lambda,  
Terraform,  
HTML, CSS,  
Panda3D

### Graduate Teaching Assistant

University of Alabama in Huntsville

August 2018 - May 2019

Grading, one-on-one tutoring of students and laboratory instruction

C,  
Raspberry Pi,  
ARM

### Associate Software Developer

Logic Information System Nepal

November 2016 - May 2017

Design and implementation of data warehousing, reporting and archiving solutions for various international organizations including **Petco** and **Matahari**

Oracle,  
Teradata,  
Bash Scripting

### Intern

Logic Information System Nepal

January 2016 - September 2016

Design and implementation of a Virtual Reality system that constructed a partial 3D scene from 2D image/s

C++,  
OpenGL,  
VR, Android

## Projects

<b>Video Repetition Finder</b>	Detecting periodic action patterns in videos; thesis work for Master's degree program [Python, Keras, ConvNet, OpenCV]
<b>Unity Crowd Renderer</b>	Real-time crowd rendering (more than 10,000 3D animated instances) in Unity Game Engine with vastly improved performance (30 fps vs 4 fps) over existing tools [C#, GLSL]
<b>Dimension223</b>	Partial reconstruction of 3D scene from 2D image/s with VR support [C++, OpenCV, OpenGL, VR, Java, Android, Sockets]
<b>BatSS</b>	Blind Signal Separation (separation of a set of source signals from a set of mixed signals, without the aid of information about the source signals or the mixing process) using neural networks and parallel computation in GPU [Python, Numpy, OpenCL]
<b>Document Classification</b>	Natural Language Processing applied to the task of document classification done as a part of research work for identifying the coverage of technology news in Nepali newspapers; Naive Bayes Classifier and Support Vector Machines were explored [Python, Numpy, Scikit, NLP]
<b>Yatra</b>	Collaborative Filtering based recommender implemented in a travel web application [GMaps, Django, Python] <i>Winner, Yomari CodeCamp, 2016</i>
<b>Flipped</b>	2D platform adventure game for Android [Java, Box2D, Photoshop, Illustrator] <i>Finalist, Ncell App Camp, 2015</i>
<b>Handsfree</b>	Hand gesture input tool for PC [C++, OpenCV] <i>Winner, LOCUS Software Competition, 2014</i>

## Grants/Awards

2019	AAUW International Master's Degree Completion Fellowship
2018	AAUW International Master's Degree Fellowship
2017	Ncell Excellence Award, Ncell Pvt. Ltd.
2014	Ncell Scholarship Award, Ncell Pvt. Ltd.
2012-2016	Silver Jubilee Scholarship, Indian Embassy.
2010-2012	Mahatma Gandhi Scholarship, Indian Embassy.
2016	Winner, Yomari CodeCamp, Yomari Inc.
2015	Winner, Software Competition in Open Category, LOCUS