

Andy Rosales-Elias

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EDUCATION

UC SANTA BARBARA

BS IN COMPUTER SCIENCE

Exp. Jun 2019 | Santa Barbara, CA
College of Engineering
Cum. GPA: 3.2

ORGANIZATIONS

CODE2040 | CAMPUS AMBASSADOR

Creating a network of Latino/a and black computer science students.

SACNAS | SOCIAL MEDIA COORD.

Society for Advancement of Chicanos and Native Americans in Science

Los Ingenieros | ACTIVE MEMBER

SHPE Chapter at UCSB

SKILLS

PROGRAMMING

Proeficiency 4/5

Python • C++

Proeficiency 3/5

HTML • CSS • MATLAB • Unix

Familiar:

TensorFlow • Caffe • OpenCV

Flask • MySQL

OTHER

Languages

English (Bilingual proficiency)

Spanish (Native proficiency)

COURSEWORK

Data Structures Using C++

Problem Solving Using C++

Computing Using Python

Linear Algebra

LINKS

Github:// [andyyy60](#)

LinkedIn:// [andyrosales](#)

AWARDS

EUREKA Scholar

9 students were selected for a research scholarship

EXPERIENCE

UNDERGRADUATE RESEARCHER | APPLIED MACHINE LEARNING

Department of Computer Science, RACELab

Jun 2016 – Present | Santa Barbara, CA

- Work with prof. Krintz and prof. Wolski on SmartFarm - a tool that uses modern technology (IoT, cloud computing) to increase agricultural sustainability.
- Current proj: "Where's the bear?" a tool that uses machine learning based image recognition for animal detection using convolutional neural networks.
- Successfully contributed an OCR tool that reads temperature values from an image using k-Nearest Neighbor with 100% accuracy, 5 times faster than the previous tool. Used flask to make into a web service API.
- Use of several techniques to obtain labeled training data for the supervised classification model.
- Conducted research presentation and created a poster to showcase data.

STUDENT ADMINISTRATIVE ASSISTANT | HEAD ASSISTANT

Department of Earth Science

Oct 2015 – Jun 2016 | Santa Barbara, CA

- Successfully implemented a web system for departmental room reservations.
- Improved the department's website by re-modeling specific pages.

SUMMER INSTITUTE OF MATH AND SCIENCE | INTERN

California NanoSystems Institute

Aug 16 2015 – Aug 28 2015 | Santa Barbara, CA

- 32 incoming freshman selected to participate in summer research program.
- Conducted undergraduate research on Machine Learning and its applications on Optical Character Recognition under a graduate student mentor.

SENIOR CITIZEN TECHNOLOGY TRAINER | VOLUNTEER

Jan 2015 – Aug 2015 | Palmdale, CA

- Helped senior citizens use technology through individual consultation.
- Created a website for their AARP Chapter and facilitated web familiarization for the elderly members.
- Digitalized the organization's newsletter and sign-up process by implementing a sign-up page within the website.

PROJECTS

ONLINE RESERVATION SYSTEM | RESERVATIONS.GEOL.UCSB.EDU

Oct 4 2015 – Nov 1 2015

- Worked with graduate program coordinator Yann Ricard to create a web-based, room reservation for the Earth Science building
- Set up an iMac as a webserver to run Apache, PHP, and MySQL on the local network without the need to rent/buy an exterior server.

AUTOMATIC CLASSIFICATION OF DIGITS USING KNN

Aug 17 – Aug 26 2015

- Collectively worked with 3 interns on using the k-Nearest-Neighbor algorithm to create a machine learning model that classifies handwritten numerals.
- Optimized the kNN algorithm to reduce the classification time of a single digit by 400%, with 96% accuracy.
- Combined different techniques of optimization, including: changing the 'k' value and down sampling the input data.