## **DEVIN SIMPSON**

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# **EDUCATION**

University of North Carolina Wilmington

Bachelor of Science, Computer Science -Systems Concentration, December 2014

Minor: Mathematics Overall GPA: 3.691

Dean's List: Spring 2011 – Summer 2011, Fall 2012 – Fall 2014

Full time student from August 2010 - December 2014, including both summer sessions in 2011 and 2012

#### HONORS PROJECT

Age progression evaluation and human face representation – UNCW Institute for Interdisciplinary Studies in Identity Sciences (I<sup>2</sup>SIS)

January 2014 – Ongoing

- Designed and implemented a 3D human face representation application utilizing the latest novel research by I<sup>2</sup>SIS.
  - Warp a template face mesh to a scanned subjects face by selecting a small number of key vertices within a dense point cloud through image registration and a reverse lookup procedure
  - Built with Python 2.7 with a QT interface to allow for platform independence
  - Render 3D meshes with OpenGL and provide a robust 2D face registration system supported by OpenGL
  - Designed and implemented a python test script that evaluates the effectiveness of face aging algorithms and models at I<sup>2</sup>SIS Utilizing multiple 3rd party libraries such as numpy, scipy, for data computation and matplotlib to render the test results.
    - C++ based I<sup>2</sup>SIS source code (that was being tested) required numerous iterations to improve functionality as well as new functionality (written by me).
    - Published evaluation procedures and results at the International Joint Conference on Biometrics in October 2014

#### **CLASS PROJECTS**

Java Dungeons and Dragons character creation tool

August 2014 – December 2014

- Designed and implemented a program to produce valid Dungeons and Dragons 5<sup>th</sup> addition characters
  - Was Chief Requirements Engineer in a three member group designing and building the project

Unreal Engine 4 Computer Game project

August 2014 – November 2014

- Designed and Implemented a prototype level of a video game using the Unreal Engine 4 and C++ in a small group
  - Was responsible for most of the C++ programming in the project including game logic, enemy navigation, and animation triggers

3D Modeling Projects

January 2013 - May 2013

 Modeled, Textured, and Lit models of the Griffith Observatory and an early 20<sup>th</sup> century city street scene using Maya 2013 and Photoshop

# COURSE WORK

- Completed 66 major credit hours in Computer Science with a Computer Science course GPA of 3.816 with noteable courses including Scientific Computing, Operating Systems, Prgramming Languages, Data Structures, Computer Networks, Computer Graphics, Computer Gaming, and Software Engineering
- Completed 20 minor credit hours in Mathematics, with a minor GPA of 3.75 with notable courses including Statistics, Calculus I, Calculus II, Multivariate Calculus, Differential Equations, and Linear Algebra and Matrices

## PROGRAMING LANGUAGES AND SKILLS

- Most familiar with the Python and Java programming languages as well as some familiarity with C++ and C and have had some exposure to HTML, PHP, CSS, R, Ruby, MATLAB, and lisp
- Experience using open source libraries such as OpenGL, OpenCV, matplotlib, numpy, scipy, and QT in a variety of IDE's

## **WORK EXPERIENCE**

Television Apprentice

August 2009 - June 2010

New Hanover County Schools, Wilmington, NC

• Ran technical positions during television taping and live broadcast including cameras, video switching, graphics, and audio and edited news packages with a small team

# VOLUNTEER WORK

UNCW Institute for Interdisciplinary Studies in Identity Sciences (I<sup>2</sup>SIS)

January 2013 – December 2013

• Designed and built a face image dataset used for age-progression evaluation under supervision from key lab members

# REFERENCES

Dr. Eric Patterson Associate Professor, Computer Science Department University of North Carolina at Wilmington pattersone@uncw.edu, (910) 962 – 7701

Marni Ferner Lecturer, Computer Science Department University of North Carolina at Wilmington mferner@uncw.edu, (910) 962 – 7567

Dr. Karl Ricanek Professor, Computer Science Department University of North Carolina at Wilmington ricanekk@uncw.edu, (910) 962 – 4261