OMB No. 0925-0001/0002 (Rev. 08/12 Approved Through 8/31/2015)

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.  
Follow this format for each person. DO NOT EXCEED FIVE PAGES.

NAME: Loiacono, Alexnder T

eRA COMMONS USER NAME (credential, e.g., agency login): ALOIACONO

POSITION TITLE: Application Programmer

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

| INSTITUTION AND LOCATION | DEGREE  *(if applicable)* | Completion Date  MM/YYYY | FIELD OF STUDY |
| --- | --- | --- | --- |
|  |  |  |  |
| Florida Gulf Coast University, Fort Myers, Florida |  | 2008-2010 | Computer Science Engineering |
|  |  |  |  |
| University of Florida, Gainesville, Florida | Bachelor of Science | 2010-2013 | Computer Science Engineering |
| University of Florida, Gainesville, Florida | Graduate Certificate | 05/2017 | Biomedical Informatics |

**NOTE: The Biographical Sketch may not exceed five pages. Follow the formats and instructions below.**

**A. Personal Statement**

Currently, I serve an Application Developer in the Biomedical informatics group in the Department of Health Outcomes and Policy. In this position I work on the data transformation for the One Florida project. I am responsible for converting partners’ data into the Common Data Model (CDM) that is outlined by PCORNet. I am also a part of the team that is working to convert the CDM into an ontology. I also generate data sets, from this data, to provide to approved researches. I also work on the Models of Infectious Disease Agent Study (MIDAS) project where I support the Ontology Based Catalogue (OBC) which is a website that lists papers, datasets, and models about infectious diseases.

**B. Positions and Honors**

Positions and Employment

2013-2016 IT Expert, CTS-IT Clinical and Translational Science Institute, University of Florida

2016- Application Programmer, Biomedical Informatics, University of Florida

**C. Contribution to Science**

Role of VIVO in contribution to research networking community and Linked Open Data

From 2013 to today I have contributed to the UF implementation of VIVO along with contributing to the open source project. This community is focused on cataloging and distributing information about academic and scientific contributions of individuals and the connections between them. (vivoweb.org) The system has been used to define and map social networks between researchers based on contributions to publications, grants, patents, associations, and almost any other academic activity. The system also freely makes all data available as web based Linked Open Data. In 2009 the project, “VIVO: Establishing a National Network of Scientists”, was funded by NCRR U24RR029822. Today the VIVO project is part of the non-profit Duraspace foundation (duraspace.org). VIVO is installed worldwide. I have also been a contributor of the VIVO data harvester2 and the University of Florida’s VIVO Linked Open Data Set3, the UF Data Quality Improvement project4, the VIVO Pump5, Wordpress VIVO Card6.

1(Börner, K., Conlon, M., Corson-Rikert, J., & Ding, Y. (2012). VIVO: A semantic approach to scholarly networking and discovery. *Synthesis lectures on the Semantic Web: theory and technology*, *7*(1), 1-178.)

2  (Christopher P. Barnes, et al., (2015), VIVO-Harvester, <https://github.com/vivo-project/VIVO-Harvester>)

3  (Christopher P. Barnes, et al., (2015). all-uf-triples: v0.0.1 August 2015 version of All UF triples from vivo.ufl.edu. Zenodo.[10.5281/zenodo.23420](http://dx.doi.org/10.5281/zenodo.23420))

4 (Conlon, Mike, et al., (2014), UF Data Quality Improvement, <https://github.com/ufvivotech/ufDataQualityImprovement>)

5 (Conlon, Mike, et al., (2015), The VIVO Pump, <https://github.com/mconlon17/vivo-pump>)

6 (Conlon, Mike, et al., (2015), Wordpress VIVO Card, https://github.com/ctsit/wordpress-vivo-card)

A Consortium to study Novel Markers of Early Alzheimer’s Disease

In 2015 I was able to contribute, in the role of Informatics Lead and Co-Investigator to the “Consortium to study Novel Markers of Early Alzheimer’s Disease”, funded by a State of Florida Ed and Ethel Moore research grant. The project involved designing a data collection and aggregation system to prospectively collect a registry of information pertaining to Alzheimer’s disease. l helped design, implement and collect the computerized version of neurocognitive measures and Alzheimer’s related clinical, phenotypic, genetic and MRI data sets. This data serves as the foundation for scientific study of Alzheimer’s disease and amnestic mild cognitive impairment in the ethnically diverse population of Florida’s elderly. In addition I contributed to the creation of a toolset to assist investigators with their research; the Software Toolset for Alzheimer’s Research (STAR) system. The STAR system is a package of Python based software tools for secure data transfer of MRI images using RED-I Dropper1, the creation of neurocognitive forms in REDCap and design of a web portal2 for web based data collection and the dissemination of project related information.

1(Kevin S. Hanson, et al., (2015), RED-I Dropper,<https://github.com/ctsit/redi-dropper-client>)

2 (Hanson, K., et al., (2015, February 1). Alzheimer's Disease Research in Florida. Retrieved August 20, 2015, from <http://www.alzfl.org>)

The Colorectal Cancer Decision Aid Application (CCDAA)

CCDAA is a medical decision aid implemented as a web based survey tool.  Conceived by François Modave, PhD and Navkiran Shokar, MD, MPH at the Texas of Tech in El Paso, Texas, this decision aid is designed to educate underserved populations about colorectal cancer (CRC) screening methods and guide them through the process of selecting a CRC screen method.  The software uses text, graphics, audio and video to educate and survey patients.The bilingual interface, low-literacy level text, and narration of survey text is designed to meet the needs of an underserved Hispanic population in El Paso. I was part of the team at the University of Florida that designed and wrote the CCDAA software.  CCDAA has been released as an open source project on [Github.com](http://github.com/)1 to allow adoption and adaptation at other institutions that who seeks to improve CRC screening.  Our modular, data-driven allows the survey content to be changed without application revision. Similarly multiple languages are represented as data to allow adopters to add language content as needed. The responsive design allows the CCDAA to display as well on tablet computers and phones as it does on desktop computers.

1(Philip B. Chase, Christopher P. Barnes, et al., (2015), Colorectal Cancer Decision Aids,<https://github.com/ctsit/ccdaa>)

The Medical Decision Aid Tool (MDAT)

MDAT is a set of software libraries to implement a medical decision aid. These libraries are designed to select the best of two or more alternatives given responses to a list of criteria.  Conceived by François Modave, PhD, for the Colorectal Cancer Decision Aids Application (CCDAA), this software uses a fuzzy measure to finds the largest Choquet integral from a set of alternatives. I was part of the team at the University of Florida that designed and wrote the MDAT.  MDAT has been release as open source software on [github.com](http://github.com/)1 to allow universal access and use in other projects.  It is published in the Python Package Index2 to allow for ready to access using standard software management tools.  While this tool we created for CCDAA, the software is completely data driven.  It can find the best alternative for any problem given any set of two or more alternatives and one or more criteria.  MDAT is written as a software library to allow easy inclusion in other programs.

1(Philip B. Chase, Christopher P. Barnes, et al., (2015), Medical Decision Aid Tool,<https://github.com/ctsit/mdat>)

2(Philip B. Chase, Christopher P. Barnes, et al., (2015), Medical Decision Aid Tool,<https://pypi.python.org/pypi/mdat/>)

**D. Research Support**

Completed Research Support

R01 AR056973 (PI: K Vandenborne) 05/05/10-04/30/15 NIH/NIAMSD Magnetic Resonance Imaging and Biomarkers for Muscular Dystrophy

The goal of this project is to develop a way to observe whether or not new therapies are effective in correcting the disease process in muscles of boys with Duchenne Muscular Dystrophy (DMD) without the need to take muscle biopsies. There is evidence in mouse models of both DMD and limb girdle muscular dystrophy that magnetic resonance imaging can be used to track disease progression and monitor the effectiveness of therapeutic interventions. This project will extend our past mouse studies to boys with DMD.

Role: Software engineer, server admin

VIVO NIH/NCRR “VIVO: Establishing a National Network of Scientists”, funded by NCRR U24RR029822.

9/2009-8/2012

Goals: As part of a multi university collaborative effort, create an ontology based system to curate research information about investigators, including publications, grants and research interests and then provide tools to facilitate researcher discovery and collaboration. Create and opensource project to disseminate all tools and data and to facilitate adoption of the VIVO system to other universities around the country.

Role: Software engineer, server admin, data steward

**OneFlorida Data Trust**

**The OneFlorida Data Trust is the informatics infrastructure that supports pragmatic trials, comparative effectiveness research, implementation science, and other research in the OneFlorida Clinical Research Consortium. It contains collated claims, electronic health record (EHR), and other data on a broad-based, unselected population of ~10 million people in Florida. The data are limited to a Health Insurance Portability and Accountability Act (HIPAA) Limited Data Set (LDS), which restricts the types of protected health information (PHI) to include only dates (e.g., birthdates and dates of service) and location (to zip code level).**

**Role: Application developer**

**MIDAS**

The Ontology-based catalog of infectious disease epidemiology (OBC.ide) is a Semantic Web application that enables users to search for publications, datasets, reports, and disease transmission models. We have indexed information items relevant to the work of the MIDAS research network, to help scientists, modelers, and model developers find relevant information resources helpful to designing and building disease transmission models and conducting studies using them. OBC.ide is funded by award from U24GM110707 from the National Institute for General Medical Science.

Role: Application developer