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3D Applications Devleoper

Joseph L. Conrad

University of South Florida, josephconrad@mail.usf.edu

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JOSEPH L. CONRAD

(410) 960-8770 | jlconrad11@gmail.com | <https://www.linkedin.com/in/thejoeconrad>

WORK EXPERIENCE

3D Digitization Specialist, Smithsonian Institution- Digitization Program Office (DPO), Washington, D.C 05/2017 – Present

- Further the Smithsonian Institution’s research, educational, and creative missions by creating open source 3D assets for the Smithsonian’s open source, digital 3D viewing platform in collaboration with museum units and staff
- Created a technical 3D digitization training program which allows program managers to make realistic decisions regarding 3D tools and processes for documenting their collections in 3D
- Consulted with museum units, using customer focus and an attention to detail and quality, to identify 3D scanning requirements for their unit, demonstrating techniques and workflows, and ensuring client satisfaction
- Represent the DPO in a wide variety of professional communication formats which include guiding tours of the DPO office to donors, potential donors, and Smithsonian Institution executives
- Support museum units with 3D technical expertise through field operations and data processing activities in support of the Smithsonian’s 3D digitization efforts
- Write documentation and outreach content for 3D tools for internal use and future distribution on the DPO blog
- Assist in the writing of statements of work for 3D scanning projects which are outsourced to 3rd party contractors
- Test experimental software to evaluate effectiveness and identify shortcomings

Lead Digital Modeler/Application Engineer, Direct Dimensions Inc.(DDI), Owings Mills, MD 01/2014 – 05/2017

- Create 3D models of physical objects using 3D software technologies and equipment, from photogrammetry to short and long-range laser scanning, for world’s leading authority in the field
- Develop 3D scanning knowledge by performing 3D data capture for clients in a variety of industries including aerospace, BIM, cultural heritage, mechanical engineering, medical, art, and the film industries
- Coordinate with sales manager to identify technical problems that must be solved with potential projects, use sound judgment to troubleshoot issues, and make recommendations to solve or reduce the number of problems
- Manage small teams of 3D modelers to ensure the creation of 3D models at client specifications on strict deadlines
- Create, support, and maintain solid relationships with clients by working closely in the field, in data processing, and in the design of client training sessions
- Apply problem solving skills to 3D CAD reverse engineering projects by identifying problems with complex 3D data, evaluating solutions, and applying an applicable workflow
- Present talks at industry conferences and develop new business leads at DDI conference tradeshow booths
- Overcome difficulties and remain flexible when encountering problems while collecting data in the field
- Manage projects and collaborate with colleagues within and across work departments on multiple projects & tight deadlines

Quality Assurance Intern, Product Engineering, Geomagic Inc., Cary, NC 05/2012 - 06/2012

- Operated and tested experimental 3D hardware and software to evaluate ease of use and identify shortcomings
- Suggested improvements to software functionality to allow for a more user-friendly experience

Graduate Assistant, Alliance for Integrated Spatial Technology (AIST), University of South Florida, Tampa, FL 09/2011 - 12/2013

- Collaborated with colleagues at agencies including the University of South Florida, the US National Park Service, and Instituto Nacional de Antropología e Historia, Mexico to create 3D models of ancient structures and artifacts with 3D hardware and software
- Presented on the importance of 3D technology use at USF to local media, potential donors, and the USF Board of Trustees which led to further exposure
- Developed new, innovative workflows which provided new insight into archaeological problems, artifacts, and hypotheses

EDUCATION & HONORS

MASTER OF ARTS – Ancient History, University of South Florida – Tampa, FL December 2013

MINOR - 3D Visualization Technology

- Major Project: Ram3D
 - Recorded screenshares and how-to videos on the use of 3D PDFs for my academic advisor’s webpage

BACHELOR OF SCIENCE: MARINE SCIENCE & BACHELOR OF ARTS: HISTORY, Eckerd College, St. Petersburg, FL May 2010

TRAINING/CLIENT SUCCESS EXPERIENCE

- Artec3D handheld 3D scanners and Artec Studio software
 - Train groups of clients and interns, from absolute beginners to experts, in the use of Artec 3D scanners and Artec 3D software in a classroom setting using a focus on customers, an attention to detail and quality, while working across time zones
 - Resolve and identify customer technical/engagement issues regarding hardware/software malfunctions and provide recommendations to overcome unique use case scenarios with hardware/software in person, via webinar, on the phone, and in writing
 - Conduct Artec3D sales demonstrations/consultations with customers, tailored to their market and product requirements, within the private and public sectors resulting in individual sales of \$20,000+
 - Beta test new versions of Artec Studio software with the Artec3D software development team in Moscow, Russia
 - Collect, process, and package sample datasets to share with customers for marketing, training, and evaluation
 - Point-of-contact for clients and customers during the Artec3D purchasing process to assess their needs, provide information, and determine if their problem can be rectified with the use/purchase of an Artec 3D scanner
 - Promote Direct Dimensions Inc. and 3D scanning technology at conferences and trade shows by making clear and convincing oral presentations to diverse industry audiences and developing partner relationships while representing DDI at tradeshow tables
 - Earned Direct Dimension Inc.’s first Artec3D Gold Certification awarded for exceptional product knowledge (currently 1 of 7 Gold Certified dealers in the USA)
 - Clients include: National Security Agency, Johns Hopkins University Hospital, National Geospatial-Intelligence Agency, US Army: Rapid Innovation, US Army Research Laboratory, US Navy: Human Systems, among others...
- Geomagic Design X software
 - Train a wide variety of users including engineers, museum exhibition designers, and others, in a classroom setting, to utilize Geomagic Design X reverse engineering software
 - Provide detailed answers, using verbal communication skills, in laymen’s terms to complicated technical questions and topics in person
- Faro Focus LiDAR Scanner
 - Train complete novices (interns) in the operation of 3D scanners and guide them through the acquisition of terrestrial based LiDAR data both in the field and in the office
- Faro Arm and Laser Line Probe (LLP) 3D Scanner
 - Train interns and colleagues in the calibration and operation of various generations of Faro Arms and Faro LLPs (V2, V3, Blue, PRIZM)
 - Guide interns and colleagues through the alignment of point cloud data in Innovmetric Polyworks and modeling in Geomagic Wrap

3D SOFTWARE AND HARDWARE EXPERIENCE

Hardware	Software
Artec Eva, Spider, Space Spider	Geomagic Wrap, Studio, Design X
Faro Focus	Faro Scene
Faro Arm and LLPs	Surphaser SurphExpress
Surphaser	Artec Studio
SLR Cameras for Photogrammetry	Innovmetric Polyworks
Aicon SmartScan	Capturing Reality Reality Capture
Zeiss Comet L3D	Agisoft Photoscan
	Autodesk Maya, Recap Pro