Bratislav "BaTo" Cvijetic

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Lead Project Scientist

Illustrator/Animator/Educator…Artista.

A Lead Project Scientist who is innovative, creative, graphic orientated researcher who can develop art for immersive environments. Whose experience in 3D content creation for different platforms, including VR/AR is extensive and unique. Adept in quickly learning and in mastering new technology, equally successfull in group or individual setting and proficient in multiple software programs and game engines

Skills and teaching media include basic and advanced programs in:

Game Asset Creation, Illustration, 2D/3D Animation, Graphic Design, 3D Modeling, Compositing, Video Editing, Storyboarding, Digital Art, Painting, Photography, Motion Capture, Comic Book Art, AR/VR, 3D Scanning, Photogrammetry, Web Development, Mobile Development…

EDUCATION

2009   MFA in Animation, Savannah College of Art and Design, Savannah, GA

            Thesis: "Alteration of a Temperament" Savannah College of Art and Design, Savannah, GA (USA), 2010

            Advisor: Prof. Edward Kinney

2006   BFA in Illustration, University of North Carolina at Charlotte, Charlotte, NC

2006   Minor in Art History, University of North Carolina at Charlotte, Charlotte, NC

PROFESSIONAL EXPERIENCE

2020 *Lead Project Scientist-Graphics and Animation*, Old Dominion University-The Virginia Modeling, Analysis, and Simulation Center (VMASAC), Suffolk, VA

Lead Artist in Residence program and was responsible for promotional material, weekly planning, and live demo of VR Sculpting.

Supported the design and implementation of a Brooks Crossing iLab, which includes promotional videos, flyers, and workshops.

Contributed to ODU's Distance Learning, by developing a 360-video capture of ODU campus.

Developed content/3D Assets for CLOUDES/Cybersecurity Game that teaches about Dos/DDoS attack.

Developed a 400 Game Design Course that will be taught at ODU using Unity/Unreal Game Engines.

Supported the design and implementation of a 2020 GameJam @ VMASC, which includes promotional videos, flyers, workshops, and setup.

- Participated on Pilots and Proposal Development
- Participated in both funded and internal research
- Participated in Community Support Activities
- Participated in Self-Improvement Activities
- Lead and developed content for the Stress-Free Art Sessions
- Lead Artist-in-Residence Program
- Developed 3D graphics and animations for different projects
- Successfully integrated 3D assets into the game engine environment
- Managed various projects at a time and met the deadlines
- Created 2D/3D videos, brochures, icons, logos, and illustrations

2016 *Senior Project Scientist-Graphics and Animation*, Old Dominion University-The Virginia Modeling, Analysis, and Simulation Center (VMASAC), Suffolk, VA

- Created logos, marketing material for VMASC and other research areas
- Developed 3D graphics and animations for Catalhoyuk, ZAP, Non-Lethal Weapons Project, Video for an ODU M & S Project, Video for a SoSOA Project, GRID Project, Sph3-ro and the desk HUB, The Barry Art Museum, M&S 3D, Robert's Ridge Video, NATO VR Environment, Future Living Project, Steam on Spectrum, Night on Spectrum, Obstacle Course Game, LVC, Digital Shipbuilding Video, Steam on Spectrum Kinect Game
- Successfully integrated 3D assets into different game engines
- Managed various projects at a time and met the deadlines
- Taught different workshops: 3D Sculpting and Digital Shipbuilding

2015 *Adjunct Faculty – Graphic Design*, Norfolk State University, Division of Fine Arts, Norfolk, VA

- Taught Advanced Graphic Design Courses
- Created Syllabi for the Advanced Graphic Design Courses
- Attended and contributed to the weekly faculty meetings
- Assisted other faculty with gallery and exhibition tasks

2010 *Research Associate - Graphics and Animation,* Norfolk State University-Creative Gaming & Simulation (CGS) Lab**,** Norfolk, VA

- Supervised, advised, mentored, and taught undergraduate and graduate engineering and computer science students in graphics (3DS Max, Photoshop, Shiva 3D)
- Developed websites, logos, marketing material for the CGS Lab
- Designed and developed graphics and animations for VNurse (a $4.2 million project funded by the Department of Defense)
- Developed graphics for iOcean, iAstro, iChem, Kwizopia, KemQuest, Blood Feud3D apps/games (iOcean, iAstro, and Kwizopia are currently available on the iTunes store)
- Assisted engineering master's thesis students with the development of the graphics for their projects
- Served on the committees of eight masters students in electronics engineering.
- Assisted the director with workshops, conferences, and lab related tasks
- Served as the lead coordinator for the Motion Capture lab. Key responsibilities include the maintenance and usage of the Motion Capture lab

2010 *Freelance Artist*, 3D Animation Video, Privateer Industries, Virginia Beach, VA

- Developed the video for http://www.privateerindustries.com
- Animated the simulation of an amphibious plane on land, water, and air
- Rendered the composition shots using Maya's mental ray rendering technique

2009 *Freelance Artist*, Web Site Development, EDC INC., Kernersville, NC

- Developed the website for EDC Incorporated at http://www.edcincorporated.com
- Photographed over two hundred products and edited the images using Photoshop to amplify the finest appearance of the product aligned to the company's vision
- Created a Flash intro animation to the website to enrich the capability of EDCInc. in technology

2009 *Freelance Artist*, 3D Dog/quadruped, Client: Brad Gunderson, Ifreelance Contractor

- Created a 3D quadruped for a client on http://www.ifreelance.com
- Developed a 3D Model of a dog that had to be modeled, textured, rigged, and skinned
- Communicated with the client on regular basis in order to achieve theclient's vision for the product

2008   *Teacher Assistant*-Graphics, Savannah College of Art and Design, Savannah, GA

- Prepared lesson materials, presented subject matter to students, assessed student's progress, and provided on-going feedback including grading assignments, and
- Taught, tutored, and assisted undergraduate students with Adobe Photoshop, Illustrator, and Autodesk Maya
- Maintained PC and Mac computers in the lab and assisted students with hardware and software use

PROFESSIONAL MEMBERSHIPS/COMMITTEES/SERVICES

Professional Societies

AIGA: The Professional Association for Design, Supporting Member, 2015

Master's Thesis Committee Member

- Cyber City Dash: a 2D Platforming Adventure Game Using Image-Word Association, Taylor Armstead* (January 2013 – July 2015 – NSU-EEN graduate)
- Kwizopia: a 3D Trivia Game for K-12 Education, Walaa Mahmoud* (January 2012 – May 2015 – NSU-EEN graduate)
- Digital Lockdown: A 3D Adventure Game for Engineering Education, Shawn Mull* (August 2013 – May 2015 – NSU-EEN graduate)
- KemQuest: A Shiva 3D Educational Game for Chemistry Students, Abhinav Kanukunlta* (August 2012 –May 2015 – NSU-EEN graduate)
- A Simulation within a Simulation: The VNurse Automatic Drug-Dispensing Unit, Togba Liberty (August 2010 – December 2012, NSU- EEN graduate)
- BloodFeud: An Educational Game for Children with Blood Disorders, Michael Westbrook (Summer 2011 –December 2012, NSU- EEN graduate)
- Case Studies Unit Development for the VNurse Project, Linmin Pei (May 2010 - December 2011, NSU- EEN graduate)
- Clarence Edmonds –EEN (2014-2015)

Workshop Co-Presenter

- "Introduction to Gaming and the Kodu Game" Engineering Science Alive Day, NGE, Norfolk, VA, Saturday September 26. 2015
- Science Alive Girl Scout Workshop, Electrical Engineering workshop, Saturday September 27th, 2014

- Massie Emerging Young Leaders Community Summit, Gaming Workshop, Saturday Feb 22, 2014

- "Introduction to Gaming and the Kodu Game Engine", Spartan Prep Academy Presentation, NSU-CGS, Norfolk, VA, August 6th, 2013

- "Computer Gaming and Simulation: Introduction to Kodu Gaming Engine", President's STEM Initiative Presentation, NSU-CGS, Norfolk, VA, July 31st, 2013

- "Introduction to Gaming and the Kodu Game Engine", Health and Science Summer Academy, session for middle school students, July 15 - 16, 2013, NSU
- "Workshop on Kodu", NSU, July 2012.
- "Introduction to Gaming and the Kodu Game Engine", Saturday Scientist Program, workshop for high school students, April 21, 2012, NSU
- "VNurse: A 3D Simulation environment for Nurse Education and Training", Hampton University Nursing Department graduate program, June 2011
- Teacher Workshop: "Modeling and Simulation using Scratch", Scratch Day, NSU, June 4, 2011
- "Getting LinkedIn", Staff Development Workshop, NSU, May 2011
- "Workshop on Autodesk 3DS Max & Stonetrip ShiVa 3D", NSU, April 2011
- "GameMaker Workshop". NSU, February 2011
- "TechFest & National STEM Video Game Challenge using Scratch", NSU, January 2011
- "Social Media: Get connected", September 25th, 2010, Society of office Professionals workshop, Norfolk State University
- Teacher Workshop: "Modeling and Simulation using Scratch", Scratch Day, NSU, May 2010
- S.T.E.M It's A Girl Thing: Teacher Workshop, "Gaming and Simulation", Rasha Morsi, April 10, 2010

EXHIBITIONS

2016   The Chrysler Museum-The narrative of Moses Grandy, *Norfolk, Virginia*

2006   The Lou Gallery University of North Carolina at Charlotte, *Charlotte, North Carolina*

AWARDS/RECOGNITIONS

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2005
Judged Exhibition at University of North Carolina at Charlotte, AWARDED *2*

Place

2006   Art Area Award-Outstanding Achievement in Illustration, *University of North*

CONFERENCES (EXPOS)

- MODSIM World Conference (Expo), Hampton Roads Convention Center, Hampton VA April 15-17, 2014
- MODSIM World Conference & Expo, Virginia Beach Convention Center, VA Oct. 11- 14, 2011

- Technical and Career Education Conference, Virginia Beach, VA June 8, 2011
- MODSIM World Conference & Expo, Hampton Roads Convention Center, Hampton, VA Oct. 13-15, 2010

GRADUATE PRODUCTIONS

2010   A Short 3D Animation Film in support of the graduate thesis "Sweet Lullaby"

3D Animation film in support of MFA Thesis at Savannah College of Art and Design

Responsible for the entire film including concept design, storyboard, modeling, texturing, rigging, skinning, animating, rendering, directing, producing, sound design, visual effects, compositing, exporting, publishing.

Advisors: Prof. Edward Kinney, Prof. Alessandro Imperato, and Prof. Jacques Khouri

2008   A short 3D animation Film "*Antique Collector*"

Graduate Collaborative Project at Savannah College of Art and Design

- Developed concept design, storyboard, and an animatic for the story line of Antique Collector
- Lead the animation, modeling, and rigging, as well as the maintenance of the blog
- Supervised other animation members in creating blocking and poses in their animation shots

Games/Apps

- NATO DTAG VR Experience, the 3D interactive space that had been 3D Scanned first and optimized for game environment. Fully immersive an accurate asset/object interaction using Oculus Quest S.
  - Created 3D Environment, Assets, Animations, Photogrammetry, 3D Scanning
  - Managed the graphics side of the project in the production of 3D assets creation
  - Used Autodesk Maya, 3DF, Mushroom, Photoshop, and Unity 3D in the production of all assets
  - Publishing and building for PC only…VR Oculus Rift

- Inclusive Game, the 3D game initially created for the Steam on Spectrum event is a physics game that is using Kinect to track the player. Player is a sphere in the game environment and the objective is for the sphere to place six matching objects to it corresponding shapes...as quick as possible.
  - Created 3D Environment, Assets, Animations, Visual Effects by use of Particles, 2D Textures/UIs
  - Managed the graphics side of the project in the production of 3D assets creation

- o Used Autodesk Maya, Mudbox, Substance Painter, Photogrammetry Photoshop, Illustrator, and Unity 3D in the production of all assets
- o Optimized the game by lowering draw calls: using Occlusion Culling, Lowering Poly count, using Texture Atlas, Batching for runtime and non-runtime objects, using LODs
- o Publishing and building for PC only

- Zika Awareness and Prevention Game (ZAP), the 3D game provides interactive educational exercises regarding individual-level protection practices like how to remove mosquito breeding sites around one's home, correct use of larvicide, placement of screens on windows and doors, and how to dress to defend oneself against mosquito bites.
- o Created 3D Environment, Assets, Animations, Avatars, Visual Effects by use of Particles, 2D Textures/UIs
- o Managed the graphics side of the project in the production of 3D assets creation, and game packaging
- o Used Autodesk Maya, Mudbox, MotionBuilder, Substance Painter, Photoshop, Illustrator, and Unity 3D in the production of all assets
- o Optimized the game by lowering draw calls: using Occlusion Culling, Lowering Poly count, using Texture Atlas, skinning limits to optimize for GPU Skinning, Batching for runtime and non-runtime objects, using LODs
- o Publishing and building for PC, Web, and VR using Open GL, ARCore, and ARKit

- Çatalhöyük is 3D virtual reality (VR) simulation of an ancient Neolithic town.
- o Created 3D Environment, Assets, Animations, Avatars, Visual Effects by use of Particles, 2D Textures/UIs
- o Managed the graphics side of the project in the production of 3D assets creation, and game packaging
- o Used Autodesk Maya, Mudbox, MotionBuilder, Substance Painter, Photoshop, Illustrator, Aftereffects, and Unity 3D in the production of all assets
- o Optimized the game by lowering draw calls: using Occlusion Culling, Lowering Poly count, using Texture Atlas, skinning limits to optimize for GPU Skinning, Batching for runtime and non-runtime objects, using LODs
- o Publishing and building for PC and VR using ARCore and ARKit

- VNurse is a 3D training simulation that provides a unique opportunity for nursing schools and medical establishments to increase the training and efficiency of their nursing students and professionals.
- o Created 3D Environment, Assets, Avatars, 2D Textures/UIs
- o Managed engineering students in the production of 3D assets creation, motion capture pipeline and game packaging
- o In charge of the Vicon Motion Capture lab, set up and maintained 14 ViconT20 and T40 cameras as well as 2 Vicon Cara Head Mounts
- o Used 3DS Max, Mudbox, MotionBuilder, Photoshop, Illustrator, Aftereffects, Vicon Blade, Vicon CARA, and ShiVa 3D in the production of all assets

o   Optimized the game by lowering draw calls: using Occlusion Culling, Lowering Poly count, using Texture Atlas, skinning limits to optimize for GPU Skinning, Batching for runtime and non-runtime objects, using LODs

o   Publishing and building for iPhone/iPad devices using XCode

•   Kwizopia, is a 3D quiz game intended to help K-12 students in their Standards of Learning assessments

o   Responsible for the graphic concept design, character design, and the environment design

o   Created biped rigs and skinned the avatars with the addition of facial bones to the limitations of ShiVa 3D game engine

o   Designed HUDs relative to the games theme

- o Used 3DS Max, Mudbox, Photoshop, Illustrator, and ShiVa 3D

- iOcean Interactive is a 3D educational app developed to supplement high school oceanography. It is intended as a resource for students and provides a fun way to learn through interactive visualization
    - o Designed, modeled, textured, rigged, animated, and exported 3D assets/objects into the ShiVa 3D game engine.
    - o Set up the environment in the game engine (assigned lights materials, textures, and animation necessary for the completion of the app)
- o Created HUDs/UIs and colliders/sensors as needed
- o Used 3DS Max, Mudbox, Photoshop, Illustrator, and ShiVa 3D

- iASTRO Interactive is a 3D educational app developed to supplement high school Astronomy. It is intended as a resource for students and provides a fun way to learn through interactive visualization
    - o Designed, modeled, textured, rigged, animated, and exported 3D assets/objects into the ShiVa 3D game engine
    - o Set up the environment in the game engine (assigned lights materials, textures, and animations necessary for the completion of the app)
- o Created HUDs/UIs and colliders/sensors as needed
- o Used 3DS Max, Mudbox, Photoshop, Illustrator, and ShiVa 3D

- KemQuest is a 3D fantasy adventure educational game designed and developed to educate high school and college students on the fundamentals of chemistry. The game assesses students on placement of elements in the periodic table based on their categorization, knowledge of atomic structures, atomic weight and number.
- o Designed, modeled, textured, rigged, animated, and exported 3D assets/objects
- o Used Maya, Mudbox, Photoshop, Illustrator, Photoshop, and Unity 3D

- Blood Feud 3D is a medical education game designed to teach young patients about specific blood disorders and diseases, in this case, leukemia, sickle cell anemia, and idiopathic thrombocytopenic purpura (ITP)
- o Designed, modeled, textured, rigged, animated, and exported 3D assets/objects
- o Used Maya, Mudbox, Photoshop, Illustrator, Photoshop, and Unity 3D

Website Designs

- VNurse Website (Adobe Illustrator, Photoshop, Dreamweaver and Time Arts) 2015 http://vnurse.nsu.edu
- CGS Website (Adobe Illustrator, Photoshop, Dreamweaver and Time Arts) 2015 http://cgs.nsu.edu

Brochure/Poster/Flyer/Retractable Designs

- Graduate Engineering Retractable (Adobe Illustrator, Photoshop, and Time Arts) 2015
- Undergraduate Engineering Retractable (Adobe Illustrator, Photoshop, andTime Arts) 2015
- Graduate Certificate in Gaming and Simulation at Norfolk State UniversityFlyer (Adobe Illustrator and Photoshop) 2015
- Splash screens for the Department of Engineering Website (Adobe Photoshop and Time Arts) 2015
- Graduate Engineering Brochure Trifold (Adobe Illustrator, Photoshop, and Time Arts) 2015
- Undergraduate Engineering Brochure Trifold (Adobe Illustrator, Photoshop, and Time Arts) 2015
- Creative Gaming & Simulation Brochure Trifold (Adobe Illustrator, Photoshop, and Time Arts) 2015
- Creative Gaming & Simulation Project Book (Adobe Illustrator, Photoshop, and Time Arts) 2015
- VNurse Brochure Trifold (Adobe Illustrator, Photoshop, and Time Arts) 2015
- Department of Engineering Logo (Adobe Illustrator, Photoshop) 2015
- VNurse Poster Design (Adobe Illustrator, Photoshop) 2012

Storyboarding and Videos

- Non-Lethal Weapons Project (Maya, Adobe Photoshop, Illustrator, Unity 3D and Aftereffects)2018
- Robert's Ridge (Maya, 3DS Max, Adobe Photoshop, Illustrator, Unity 3D, Marmoset, Marvelous Designer, MotionBuilder and Aftereffects)2018
- ODU M & S Project (Maya, Adobe Photoshop, Illustrator, Unity 3D and Aftereffects)2018
- SoSOA Project (Maya, Adobe Photoshop, Illustrator, Unity 3D and Aftereffects) 2018
- The Barry Art Museum (Adobe Photoshop, Illustrator, Mudbox, Maya, Marvelous Designer, Unity 3D and Aftereffects)2018

Demo Reels

- VMASC Demo Reel (Adobe Photoshop, Illustrator, and Aftereffects)2018
  https://www.youtube.com/watch?v=Fop3Z_3OYB0
- VNurse Demo Reel (Adobe Photoshop, Illustrator, and Aftereffects)2014
  https://www.youtube.com/watch?v=3b6rFC4IVa0
- CGS Demo Reel (Adobe Photoshop, Illustrator, and Aftereffects)2014
  https://www.youtube.com/watch?v=lnf1DmcKE4E
- Motion Capture Demo Reel (Adobe Photoshop, Illustrator, and Aftereffects) 2014
  https://www.youtube.com/watch?v=ETQ0b8JNrTE
- Kwizopia Demo Reel (Adobe Photoshop, Illustrator, and Aftereffects)2014
  https://www.youtube.com/watch?v=Ab2jpIdzHHc

PUBLICATIONS

- **Krzysztof J. Rechowicz**, Saikou Y. Diallo, Hector M. Garcia, John B. Shull, Bratislav Cvijetic "Making digital sense[s]: fundamentals", SpringSim '18: 2018 Spring Simulation Multiconference Baltimore Maryland April 2018

- **Rasha Morsi**, Walaa Mahmoud, Bratislav Cvijetic "KWIZOPIA: A 3D Quiz Game for K-12 Education", 9th International Technology, Education and Development Conference (INTED) 2015 Conference, Madrid, Spain, March 2-4, 2015

- **Rasha Morsi**, Mona Rizvi, Jun Wang, Bratislav Cvijetic, Cyntrica Eaton, "VNurse: A 3D Simulation Tool for Nurse Training", (Poster), INACSL 2012, San Antonio Texas, June 20- 23, 2012

SOFTWARE AND HARDWARE SKILLS

Animation Hardware

Vicon Motion Capture System, Vicon T40 and T20 Camera System, and Vicon CARA Head Mount,

Software

Adobe Photoshop, Illustrator, Fireworks, SoundBooth, AfterEffects, PremierPro, Autodesk Maya, 3DS Max, MotionBuilder, Mudbox, Z-Brush, Marvelous Designer, Octane, Marmoset, Substance Painter, Vicon Blade, Vicon CARA,

Gaming and Web Software (graphic aspects and minor scripting of the tools)

Unity 3D, Unreal 4, Stonetrip's ShiVa 3D, Torque 3D, Dreamweaver, Flash, Octane for Unity

AR/VR (software and hardware)

ARCore, ARKit, Holo Lens, Oculus Rift S, HTC Vive, Lenovo Mirage