Ardavan Bidgoli

Curriculum Vitae

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Education

May'21	**Carnegie Mellon University**, Pittsburgh, PA.
	Ph.D. Student in Computational Design, Prof. Daniel Cardoso Llach.
	Thesis Topic: Learning Matters, learning from demonstration in human-robot skill-transfer.
Aug'15	**The Pennsylvania State University**, University Park, PA.
	M.Arch. II, P.P.T.A. in Design Computing), Prof. Daniel Cardoso Llach.
	Thesis Topic: Motion Grammar for Robotic Fabrication

Work Experiences

May'17 - Aug'17   **Autodesk Emerging Technologies**, San Francisco, CA, USA.
- Design and Fabrication for AR/VR Intern, Office of chief technology officer (OCTO).
- Project Manager and Developer at Project *V-Dream*, an Immersive Platform for High Dimensional Solution Space Navigation. Integrating Stingray Platform and Project Dreamcatcher Using Machine Learning Methods.

May'16 - Aug'16   **Autodesk Applied Research Lab**, San Francisco, CA, USA.
- Computational Design and Fabrication Intern, Office of chief technology officer (OCTO).
- Designer at Project *MeshBot*, Collaborative Automated Robotic Fabrication Platform. Integrating Industrial Robotic Arms, Computer Vision, and Computer Aided Manufacturing (CAM).
- Designing Robotic End-effectors. Developing Electronic Systems for Robotic End-effectors.

Jun'15 - Aug'15   **Bentley Systems**, Exton, PA, USA.
- Product Manager Intern at Generative Component (GC) Team.
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Research Interests

Machine Learning	**Virtual Reality / Augmented Reality**
Robotics Manufacturing	**Software Development**

Related Academic Courses

10-601	**Machine Learning**, Department of Machine Learning, CMU.
10-606/607	**Math for Machine Learning**, Department of Machine Learning, CMU.
10-615	**Machine Learning & Art**, Department of Machine Learning, CMU.
12-780	**Advanced Python**, Department of Civil and Environmental Engineering, CMU.
15-494	**Cognitive Robotics**, Robotic Institution, CMU.
48-555	**Architectural Robotics**, School of Architecture, CMU.

Skills

Programming:			*Software Skills*		
Languages	**Python, Lua**		Advanced in:	Autodesk	**AutoCAD**
	JavaScript, HTML				**Dynamo**
	Processing, Arduino			McNeill	**Rhinoceros**
	C#				**Grasshopper**
Packages	**Tensorflow, Keras** (Python API)			Adobe	**Photoshop**
	OpenCV (Python API)				**Illustrator**
Hands-on Skills			Proficient in:	Autodesk	**3Ds MAX, Stingray**
Prototyping	Robots	**ABB, FANUC Robots**		ABB	**RobotStudio**
	Fab.	**3D Printing, MIG Welding, Water Jet**			**Unity**
VR Platform		**Vive, Oculus**	Familiar with:	Autodesk	**Revit**

Research and Academic Projects Involved

Jan'18-	**Robot|Art Research Team,** CMU.	
	Developing Machine Learning methods for creative application in robotics.	
Aug'16-	**Robotic Plastering Research,** CMU.	
	Developing computer vision system (hardware and software) for machine-learning based computer vision feedback loops. Under supervision of Josh Bard, CMU dFab.	
Jul'14 – Aug'16	**SALA Robotic Fabrication Lab Initiative Team**, Penn State.	
	Member of Initiative Team, R.A, with Prof. Daniel Cardoso Llach and Jamie Heiman, The Pennsylvania State University.	
Aug'14 - Aug'15	**Studies on Robotic Hot Wire Cutting**, Penn State.	
	Research project, in collaboration with SALA Fabrication Lab.	

Publications & Lectures

Mar'17	**"Assisted Automation: Three Learning Experiences in Architectural Robotics"**
	International Journal of Architectural Computing, with Daniel Cardoso Llach and Shokofeh Darbari.
Oct'16	**"Of Hands and Robots: 'Assisted Automation' and 'Robotic Enactments' in Creative Robotics Pedagogy"**
	FABLEARN 2016: 6th Annual Conference on Creativity and Making in Education (ACM SIGCHI), with Daniel Cardoso Llach and Shokofeh Darbari, Stanford, CA, U.S.A.
May'16	**"Robotic Motion Grammar"**
	Published in the Proceedings of the SimAUD, UCL, London, U.K.
May'15	**"Towards a Motion Grammar for Robotic Stereotomy"**
	Published in the Proceedings of CAADRIA 2015, May 2015, with Daniel Cardoso Llach.

Honors and Awards

Nov'17	**Graduate Student Travel Grant**, CMU.
Mar'17	**School of Architecture Travel Grant**, CMU.
Dec'16	**Best Project Prize, 15-112 Project Review**, School of Computer Science, CMU.
Nov'16	**3rd Grand Prize and Best Use of API Prize, 112 Hackathon**, CMU.
Aug'16	**Full Tuition Waiver and Stipend for PhD Program**, CMU School of Architecture.
Aug'15- Aug'16	**SCDC Student Research Grant for PhD studies**, Penn State.
Aug'15 & Jan'16	**Robert Graham Endow Grad Fellowship**, Penn State.
May'15	**Architectural Research Centers Consortium (ARCC) King Student Medal**, Penn State.
Feb'15	**Stuckeman School Graduate student travel Grant**, Penn State.
Jan'13- Aug'15	**Full Tuition Waiver and Stipend for Masters' program**, Penn State.

Teaching Experiences

Fall'17	**Introduction to Architectural Robotics, Instructor**, CMU.
Spring'17, '18	**Fundamentals of Computation Design, T.A**., CMU.
Fall'16	**Inquiry into Computation, Architecture, and Design, T.A.**, CMU.
Spring'16	**Robotic Fabrication Workshop,** Penn State.
Fall'14 –Spring'15	**Inquiry into Design Computation, T.A**., Penn State.

On-line Documents

Online Portfolio	www.ardavanbidgoli.com
Portfolio on Issuu	www.issuu.com/ardavanbidgoli
LinkedIn	www.linkedin.com/in/ardavanbidgoli
GitHub	www.github.com/Ardibid