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Joshua Adam Parker
MARCH I, B.S. EE

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EMPLOYMENT			
2015-2016 2010-2012	**Director of Research / Senior Architect** OPEN ARCHITECTURE	Beijing, China
2014-2015	**Senior Architect / Lead Computational Designer** AEDAS	Beijing, China
2009-2014	**Computational Design Consultant** INGAME, NODE, etc.	Shenzhen, China Beijing, China
2008-2009	**Instructor** SHENZHEN INTITUTE OF INFORMATION TECHNOLOGY	Shenzhen, China
2007-2008	**Web Developer / Interaction Designer** FREELANCE	Shenzhen, China
2007	**Project Designer** ANCOR INC.	Syrcuse, NY
2004-2007	**Graduate Teaching Assistant** SYRACUSE UNIVERSITY	Syracuse, NY
2002	**Component Design Engineer Co-op** INTEL CORPORATION	Boston, MA
2001	**Welder, Fabricator** COMMERCIAL WELDING	Seattle, WA

EDUCATION			
1998-2002	**UNIVERSITY OF WASHINGTON** BS in ELECTRICAL ENGINEERING	Seattle, WA

Recipient of Outstanding Thesis Prize for work in embedded systems. Coursework: OOP in C++, Algorithms in C, Computational Theory and Complexity, Computer Organization, Digital Circuits, Embedded Systems, Calculus, Probability, Set Theory, Discrete Mathmatics. In-major GPA: 3.5.

2003-2007	**SYRACUSE UNIVERSITY SCHOOL OF ARCHITECTURE** MASTER OF ARCHITECTURE	Syracuse, NY Florence, It

Specialized in Computational Design and Interaction. Led tutorial sessions and assisted with course instruction of Digital Design and Fabrication, CAD/CAM, Structures, Advanced Building Systems.

2016-2017   Continued education

Design Computation (IaaC GSS Program), Javascript Design Patterns (Udacity), Adv. Software Construction in Java (MITx), Python for Research (Harvard / edX), Artificial Inteligence (Columbia / edX), Machine Learning, Andrew Ng (Stanford / coursera), Deep Learning, Andrew Ng (deeplearning.ai / Standford / coursera)

ACADEMIC HONORS		
2006	Graduate Research & Creative Work Grant
2005	Robert W. Cutler Travel Scholarship
2005	DIPA Travel Grant
2006	Off the Wall Competition, 2nd place
2003	SUSOA Graduate Merit Scholarship
2004-2006	GMC TA Scholarship(s)
2002	UWEE Most Outstanding Senior Project

SKILLS & TECHNOLOGIES		
Languages	Python (Proficient), Java (Prev experience), Javascript, HTML5, CSS3, AS3, SQL
Design Scripting	Python, Grasshopper, Rhinoscript, Processing, Arduino
Hardware Design	Cupl, Verilog HDL, TCL, ModelSim
Spoken Languages	English, Mandarin

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TECHNICAL EXPERIENCE

2016 — **DUNE ARTSPACE**, Bohai Bay, China, OPEN Architecture

Developed form-finding module for structural optimization of shell geometries under distributed load. Used in design of underground concrete art space, currently under construction in Beijing. Python, GHPython, Kangaroo.

2016 — **SKY CITY PHASE 5**, Wuhan, China, OPEN Architecture

Developed paneling algorithm to search design space bound by large set of functional and environmental building requirements. The constraint satisfaction problem (CSP) required application of AI and combinatoric search methods. Python, GHPython.

2015 — **OPENARCH.COM**, OPEN Architecture

Designed and developed responsive web application for open architecture using modular javascript, oocss/sass, syphonmy templating engine, and drupal cms.

2014 — **HAIKOU WEST COAST COMMERCE**, Haikou, China, Aedas

Developed 3d massing module to optimize shape and orientation of stackable highrise units for best views while satifsfying building constraints. GH, Python

2013 — **PINUP**

Built prototype for a web-based visual explorer that allows users to build interactive mixed-media experiences for presentation and exhibition. Java, AS3

2013 — **SEMPAD**

Designed and prototyped a semantic collaborative research platform to facilitate the construction and management of small-scale text and metatext collections. SMW.

2012 — **PROTOCELL HABITAT**, OPEN Architecture

Developed set of topological and geometric surfacing algorithms that work together in stages to generate a sustainable habitat through the self-organization and local optimization of cellular living units and shared utility networks.

2011 — **NETWORKED CITY**, 22@, BARCELONA, IaaC

Collaborated on Networked CITY project, an installation that combines physical computing, data visualization and real time computation of urban data collected from custom IoT devices. Research was completed during smart cities workshop at the Institute for Advanced Architectural of Catalonia, Barcelona.

2011 — **TSINGHUA UNIVERSITY ENERGY CENTER**, Shenzhen, OPEN Architecture

Developed standalone CAD application for visualizing and generating configurations of interior space, and exterior effects. Used in the design of winning entry in international competition for Tsinghua University Energy Center in Shenzhen. Java

2011 — **UPLIFT HANGER**, Anhui, China, OPEN Architecture

Built standalone 3d CAD app to aid in the development of a highly differentiated and prefabricated concrete frame and panel system used in the design of a zero-energy airship hanger in Anhhui. Java

2011 — **BAOTOU JAZZ TOWERS**, Baotou, China, OPEN Architecture

Developed 3d massing tool that converts imported sound waves into 3d form for an urban building typology, in which interlocking volumes cantilever out and extend upward with dimensions related to the resampled and processed harmonic sound waves. Java + Processing Sound library.

2011 — **LAGOS RESORT,** Lagos, Africa, OPEN Architecture

Produced collection of paneled screen patterns for building facade in Lagos. Self-organizing patterns express the informal logic of the city while self-adjusting to meet the programmatic and spatial requirements of the building. Java