Joshua Adam Parker

MARCH I, B.S. EE

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EXPERIENCE

2015-2017

Senior Architect, Researcher

OPEN ARCHITECTURE, Beijing

Built in-house design tools and CAD plugins using Python and Java. Constructed a form-finding pipeline in Grasshopper for structural optimization of subterranean Art Museum in Qinhuangdao. Developed paneling algorithm and design explorer utilizing constraint satisfaction methods. Implemented a set of evolutionary algorithms in RhinoScript for biologically-inspired mass housing research project.

2014-2015

Senior Architectural Designer

AEDAS, Beijing

Developed a 3D massing tool to optimize shape and orientation of building elements based on environmental and building data. Wrote automation scripts in Python to facilitate integrated and continuous workflows. Delivered specifications, drawings and documentation on award-winning projects and international competitions. Provided senior-level project management and creative coordination of multi-disciplinary teams.

2009-2014

Computational Design Consultant

INGAME, NODE, OPEN ARCHITECTURE, etc.

Built a standalone Java tool for Tsinghua University Energy Center that generates 3D spatial configurations based on occupancy, usage and daylight patterns. Developed a set of embedded Python scripts for rapid design iteration of modular green roof system used in design of a zero-energy airship hanger in Anhui. Developed a Java utility using Processing libraries for converting imported audio files into a formal system of interlocking volumes for Baotou residential tower.

2008-2009

Front-End Developer

FREELANCE, Shenzhen/Hong Kong/Beijing

Designed/developed openarch.com, a mobile-first bilingual website built with Drupal 8, JavaScript, Twig, Sass, and Gulp. Implemented front-end of flash-based web application for building interactive data-rich presentations. Prototyped a semantic research platform with Semantic MediaWiki templating functions, CSS, and HTML, which supports collaborative publication, annotation and curation of written works.

2004-2007

Graduate Teaching Assistant

SYRACUSE UNIVERSITY, Syracuse, NY

Led tutorial sessions and assisted with instruction of graduate and undergraduate level courses including Digital Design and Fabrication (CAD/CAM), Structures I & II, and Advanced Building Systems (ABS).

EDUCATION

1998-2002

UNIVERSITY OF WASHINGTON

B.S. in ELECTRICAL ENGINEERING

Recipient of Outstanding Thesis Prize for work in embedded systems. Coursework included 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

Master of Architecture (MARCH I)

Recipient of Graduate Research & Creative Work Grant, Robert W. Cutler Travel Scholarship, and DIPA Travel Grant. Contributed to (De)Central Park, 2nd place entry in Off the Wall Competition. Participated in Florence Program and Architecture and Urbanism in China. Specialized in Computational Design and Interaction.

2016-2017

CONTINUED EDUCATION

Design Computing (IaaC GSS Program), Javascript Design Patterns (Udacity), Adv. Software Construction in Java (MIT/edX), Python for Research (Harvard/edX), Artificial Inteligence* (Columbia / edX), Deep Learning*, Andrew Ng (deeplearning.ai/Standford/Coursera)

TECHNOLOGIES

JavaScript, Vuejs, Vue-Router, Vuex, HTML, CSS, Sass, Gulp, npm, Webpack, Git, etc.,
Python, Flask, Pytest, Unittest, MySQL, PostgreSQL, SQLAlchemy, NoSQL, JSON,
Anaconda, Virtualenv, Scipy, Numpy, Pandas, Matplotlib, D3.js, Processing, P5.js,
Photoshop, Illustrator, Rhino, Grasshopper, RhinoScript, Autocad, Revit, Dynamo, Ecotect
Previous experience with Java. Actively learning C#.