Hanni Abu

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EDUCATION

New Jersey Institute of Technology, Newark, New Jersey — Bachelor of Science, Dec 2013
Major: Mechanical Engineering

EXPERIENCE

Verticulture Farms — **Brooklyn, NY**
Software Developer/Engineer — March 2015 – Present

- Automate facility operations such as seeding, filter cleaning, fish feeding, monitoring, and nutrient dosing
- Develop and implement data acquisition software, equipment, and methods
- Generate monitoring dashboards with data visualization
- Analyze data sets to inform growing methods, operations, and business decisions
- Coordinate weekly technical meetings between engineers and farm technicians
- Establish and maintain project scopes, goals, budgets, and deadlines to be met
- Manage design and development of integrated aquaponics growing system
- Maintain database, monitoring-software, monitoring-equipment, software documentation, and company website

City-Hydroponics — **Brooklyn, NY**
Director of Research & Development — Jan 2013 – Dec 2014

- Developed prototype hydroponic apparatus (VOHS) into a commercially viable product
- Increased efficiencies per area while decreasing unit costs and installation time
- Improved system reliability and safety by adding additional features
- Routinely met with team, current and prospective investors, clients, and manufacturers
- Consulted with overseas manufacturers to dramatically decrease component costs
- Worked with frame fabricators to further optimize design and decrease manufacturing costs
- Created testing studies to evaluate growth of plants under several conditions
- Collaborated with intellectual property lawyer to create patent and protect various design aspects
- Compiled materials and componentry orders for testing and installation build-outs

NJIT Formula Society of Automotive Engineers (FSAE) — **Newark, NJ**
Frame Design Team Lead — Sept. 2012 – July 2014

- Design Formula-1 vehicle chassis around FSAE rule constraints and components requirements
- Collaborate with other team leads to meet design needs
- Optimized frame to meet weight, cost, and strength goals while complying with all FSAE rules
- Test design performance through physical and virtual torsional and bending analysis

PERSONAL PROJECTS

Learning (currently) – Django, React/JSX, refining on statistics and data analysis with Python and D3.js
Velcro (3/2015) – A visual panel used to customize and create base Bootstrap components
CopyPaste (1/2015) – A game based off the question of what the maximal pattern of copying and pasting is

ADDITIONAL SKILLS

Platforms: Windows, Mac OS, WAMP, Wordpress, Raspberry Pi, Arduino, familiar with Linux OS
Software: MS Office/Excel/PowerPoint/Visio, Solidworks, ANSYS, familiar with Pro-E Creo / Wildfire, AutoCAD
Programming: Python, Javascript, PHP, HTML, CSS, SQL, Matlab, familiar with C++, Java, BASIC, Bash/Shell scripting, PLC
Developer Tools: Visual Studio, Sublime Text 3, NPM, Bower, Gulp, Sass, jQuery, Bootstrap 3, Git/Github