Lucas Saldyt

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http://github.com/LSaldyt
Mesa, Arizona

Education

- **Barrett, The Honors College. Arizona State University** — Tempe, Arizona
  Bachelors of Computer Science, GPA: (3.7) — *Sep. 2017 - Current*
- **MIT Open Courseware** — Online
  Supplementary Courses: assignments at github.com/LSaldyt — *Ongoing*
  - Data Structures and Algorithms, Quantum Algorithmic Complexity, Quantum Mechanics, Artificial Intelligence (Winston), Artificial General Intelligence (Fridman), Society of Mind, Computer Security, Information Theory

Experience

- **Sandia National Laboratories** — Albuquerque, New Mexico
  Quantum Computation Intern — *Jun. 2015 - Sep. 2018 (3 Summers)*
  - Developed high-fidelity quantum benchmarking (Gate Set Tomography) software
  - Created a distributed high-performance simulation, verification, and data analysis software
  - Oversaw porting entire codebase (over 1 million lines) to Python3.x
- **The Fluid Analogies Research Group** — Remote (paid)
  Cognitive Science Intern — *Oct. 2016 - Sep. 2018*
  - Revitalization of Douglas Hofstadter's "copycat" cognitive model
  - Statistical analysis and comparison of various models to human data
- **Dr. Carlos Castillo-Chavez's Complex Systems Research Group** — Tempe, Arizona
  Mathematics Intern — *Oct. 2018 - Current*
  - Math and computer modeling of ant nest choice and alarm propogration
- **Unitary Fund** — Remote (paid)
  Quantum Software Researcher — *Jun. 2018 - Current*
  - Prototyping of a quantum programming language, called "Curry"
  - Presentation in Brussels, Belgium at the FOSDEM Quantum Computing Conference
- **Los Alamos National Laboratories** — Albuquerque, New Mexico
  Quantum Computation Intern (Shadow) — *April 2017*
  - Benchmarking the knapsack problem on LANL's DWave and IBM's 5-qubit machine

Skills

Programming Languages: Python, C++, Clojure, Java, Haskell

Operating Systems: Linux (Arch, Redhat, Ubuntu), MacOS X, Windows

Applications: Vim, LaTeX, Jupyter Notebook, MatLab, Autodesk design, Office suites

Libraries: tensorflow, pandas, seaborn, numpy, scikit learn

Natural Languages: English, Ukranian, Spanish

Projects

- **pyGSTi** https://github.com/pyGSTio/pyGSTi
  Sandia National Labs *2015 - Current*
  - Quantum Gate Set Tomography in Python. I am the second highest contributor with over 700 commits
- **Curry** https://github.com/LSaldyt/curry
  Unitary Fund *2018 - Current*
  - A quantum programming language built ontop of Rigetti pyquil. I lead the project, organizing a small team of software developers through the github issues and project system
- **Vorpal** https://github.com/LSaldyt/vorpal
  Independent *Dec. 2017*
  - A research and collaboration website, written in Clojure
- **Nova** https://github.com/LSaldyt/nova
  Independent *Oct. 2017*
  - An Alexa-like assistant on Linux
- **Cryptometric** https://github.com/LSaldyt/cryptometric
  Independent *Oct. 2017*
  - A server app that sends cryptocurrency statistics to a mobile phone by text

Awards

ASU New American University Scholarship ($14,000 annually)	2017
ASU Discovery Fellowship ($5,000)	2019
Fluid Analogies Research Grant ($5,000)	2017
FURI Research Grant ($3,000)	2017
Unitary Fund Research Grant ($2,200)	2018

Interests

Academic: Quantum Computing, Cognitive Science, Artificial Intelligence, Computer Science, Mathematics, Software Engineering

Sports: Okinawan Karate

Musical: Playing classical guitar and piano, composing music

Other: Writing novels (I have completed two, as well as some short stories and poetry)