DOD Secret Clearance (Active) **Jonathan Samuel** Samueljon1717@gmail.com
www.linkedin.com/in/jon-samuel Fairfax, VA 22031 202-413-7959

Education

Master of Engineering in Computer Science Dec. 2023
Virginia Tech University, Blacksburg, VA

Bachelor of Science in Chemical Engineering, Minor in Mathematics May 2020
University of Arizona, Tucson, AZ Major GPA: 3.83
Relevant Coursework: Applied Stochastic Processes, Process Controls & Simulation, Intro to Machine Learning in Python, Theory of Probability, Proof Based Linear Algebra, Formal Mathematics Reasoning & Writing, Technical Sales & Marketing

Bachelor of Science in Chemistry May 2017
University of Arizona, Tucson, AZ American Chemical Society Certified with Academic Distinction

Professional Experience

OnDemand Pharmaceuticals, *Data Scientist*, Rockville MD Nov. 2021 – Present
- Coordinated with engineers, scientists, and key stakeholders to develop a full-stack web application using **Django**, **Docker**, **AWS**, **Dash**, **Python**, **JavaScript**, & **HTML/CSS** allowing discovery within experimental design spaces while factoring in chemical and pharmaceutical supply-chains
- Developed and configured **ETL** pipelines: extracting over 50 million data entries from several chemical and pharmaceutical sources using web scraping techniques, transforming using **Python's Pandas & PySpark** modules and loading within our **Neo4J** and **MongoDB** databases
- Developed database-centric solutions to identify and optimize database performance and versatility
- Built and maintained several automation dashboards using **Streamlit.io** and **Python** to improve our analytical laboratory's efficiency by 60-fold

OnDemand Pharmaceuticals, *Junior Scientist*, Rockville MD Aug. 2020 – Nov. 2021
- Programmed automation software using **Python** & **OpenCV** modules, to quantify inflow critical process parameters
- Collaborated with direct team-members and 20+ vital stakeholders to research, design, develop, prototype, test and document a novel continuous medical and GMP manufacturing device within the pharmaceutical formulation space
- Researched and developed novel and efficient synthetic continuous processes for COVID treatment active pharmaceutical ingredients with limited domestic supply chains

Experience Knowledge & Skills (EKS) LLC, *Surveillance Support*, Multi-Location Aug. 2018 – Present
- Communicate effectively with team members and leadership to support customers in AZ, CA, OR, VA and WA
- Execute 500+ hours of confidential Department of Defense (DOD) surveillance protocols with minimal error

Think Tank at the University of Arizona (UA), *Mathematic Tutor*, Tucson AZ Aug. 2018 – June 2020
- Tutored over 3000 students one-on-one and in group settings in subjects ranging from College Algebra to Calculus III
- Strengthened department operations and student satisfaction by developing strategies to increase tutoring effectiveness

The University of Arizona, *Undergraduate Research Assistant*, Tucson AZ Jan. 2016 - Dec 2016
- Synthesized and analyzed peptides using solid-phase synthesis methods that targeted G-Protein Coupled Receptors

Personal Business, *Freelance Photographer*, www.TooslowFantasy.com Aug. 2017 – Present
- Established and launched a photography business, providing in-studio and on-location services
- Coordinate and direct creative projects with over 100 clients, make-up artist and other creative professionals

Projects

Chemical Engineering Plant Design, Senior Group Project Jan. 2020 – May 2020
- Won Best Senior Chemical Engineer Design Award for 2020
- Optimized UA Utility Heating & Cooling plants using a LaGrange multiplier modeled in **Python** to increase overall chill water process efficiency potentially reducing CO_2 emissions by 640.639 billion pounds/year
- Collaborated with design team, mentors, and UA facility management to construct a neural network utilizing gate recurrent and convolutional layers to forecast heat duty with a 10% mean absolute percent error

Modular Mining at Hack Arizona, University of Arizona Jan. 2020
- Designed an anti-collision linear regression model in **Python** for Modular Mining to implement during real-time traffic

Robo-Hackathon, Arizona State University Nov. 2019
- Assembled and programmed NVIDIA *Jetbot* using **AWS** RoboMaker and **Python** services to autonomously navigate through obstacles identifying school mascots

Chemical Engineering Design Principles, Senior Group Project Aug. – Dec. 2019
- Planned and developed a viable biodiesel process using **ASPEN** and a waste cooking oil collection route in Tucson, AZ

Technical Skills

Programming Languages: (Proficient) Python, Bash, PostgreSQL (Familiar) Java, JavaScript, HTML, CSS, Cypher
Tools: Apache Spark, ASPEN, AWS (EC2, S3), ChemDraw, Cytoscape.js, Dash.plotly, Django, Docker, Flask, Git, JMP, LaTex, Lightroom, MATLAB, MestreNova, MS. Office, OpenCV, Photoshop, Streamlit, VBA, Visio