Andy Gnias

https://github.com/AGnias47 | https://andygnias.com

PROFILE

Software Engineer proficient in backend development, particularly in Python. Have also held roles in DevOps, Infrastructure, and Machine Learning. Particularly good at debugging obscure issues, and writing strong documentation and unit tests to prevent them from happening again.

EDUCATION

M.S. in Computer Science, May 2025 (Expected)
Temple University, Philadelphia, PA
GPA: 3.83 (24 credit hours)

B.S. in Mechanical Engineering, June 2016
Drexel University, Philadelphia, PA
GPA: 3.86

Graduate Courses: Design and Analysis of Algorithms, Principles of Data Management, Predictive Modeling in Biomedicine, Data Mining, Operating Systems
Undergraduate Courses: Advanced Programming Techniques, Control Systems, Finite Element Methods, Computer Aided Design, Fluid Dynamics, Materials, Thermodynamics
Certifications: CompTIA Security+ SY0-601 (January 2022 - January 2025)

SOFTWARE

Languages
• Python, Java, C++, JavaScript (Node.js), Ruby, Perl, C, Bash, MATLAB
Development Tools
• AWS, Docker, Kubernetes, GitHub, GitLab, Selenium

GRADUATE RESEARCH

Center for Data Analytics and Biomedical Informatics at Temple University | Philadelphia, PA

Hypertension Detection — August 2022 - Present
- Develop a PyTorch Residual Neural Network model that classifies retinal images for various indicators of Hypertension
- Tune hyperparameters via an Optuna script to determine ideal model setup
- Improve training performance using methods such as oversampling and image augmentation

Social Media Bias Identification — June 2022 - August 2022
- Parsed data from articles, Tweets, and Reddit posts related to the Russo-Ukranian War
- Mined novel data from Reddit related to the Russo-Ukranian War
- Performed Sentiment Analysis on the data collected

WORK

Arcadia | Remote

Senior Software Engineer - Residential Utility Data Team — April 2024 - Present
Software Engineer III - Residential Utility Data Team — April 2023 - April 2024
Software Engineer II - Residential Utility Data Team — April 2022 - April 2023
- Developed Python modules for parsing residential utility data from external utility websites
- Lead an effort to move utility connectors from running on AWS Lambda to Kubernetes
- Implemented API and cookie-based login protocols for accessing consumer utility sites
- Increased the scope and size of unit tests, as well as giving several internal presentations to enable other team members to do the same
- Updated data models, controllers, and processors in a Rails application interacting with a Postgres database

The Stratagem Group | King of Prussia, PA

Software Engineer Senior - Cloud Development Program   September 2021 - April 2022
- Designed and implemented a backend REST API query service using Spring Boot
- Determined query syntax and rules to allow the service to search reports stored in Elasticsearch
- Implemented unit tests using JUnit and Mockito

Software Engineer Senior - App Framework & Infrastructure Program   Sept 2020 - Oct 2021
- Defined and implemented a program-wide DevSecOps pipeline that could build, test, scan, and package C++, Java, and Python applications through GitLab CI/CD
- Developed libraries in C++, Java, and Python to simplify API calls to a customer SDK
- Fixed library linking issues that occured when compiling C++ code using Autotools
- Found and resolved bugs by deploying and testing applications in an OpenShift pipeline
- Served as scrum master for an agile development team of up to 15 engineers

Co-op Program Recruitment Lead   March 2020 - April 2022
- Lead the process of recruiting and hiring students from the Drexel University Co-op program for various roles throughout the company

Software Engineer Senior - Machine Learning Program   March 2020 - October 2020
- Created and improved functions for reading and classifying incoming data from an Apache Kafka broker
- Hardened docker-compose development network to enhance functionality and stability
- Developed methods for hyperparameter optimization utilizing Optuna

Software Engineer Senior - Automated Testing Program   August 2019 - December 2020
- Created an AWS Lambda Python application to export / import TestRail project data
- Developed automated UI tests using Cucumber.js and Selenium to simulate user actions for over 40 different test scenarios
- Created Python, Java, and Node.js automated test pipeline templates in Jenkins

Lockheed Martin, Space Systems Company | King of Prussia, PA

Software Engineer   April 2018 - August 2019
Associate Software Engineer   September 2016 - April 2018
- Automated software installation and server configuration tasks
- Supported weekly deployments to a factory level test environment
- Maintained software archives on an air-gapped system in Sonatype Nexus by developing RESTful API modules
- Developed and improved End-to-end tests using Selenium and C#

University City Science Center | Philadelphia, PA

Technical Investment Analyst Co-op   September 2014 - March 2015
- Prepared and submitted grant applications through the National Institute of Health (NIH) and Small Business Innovation Research (SBIR) programs

UNDERGRAD RESEARCH

Optical Diagnostics Lab, Drexel University | Philadelphia, PA

Hess Undergraduate Research Scholar   June 2015 - March 2016
- Wrote a Python script to monitor vibration on lab equipment using an accelerometer connected to a Raspberry Pi
- Designed circuit board to read data from accelerometer and temperature monitor

Engineering Spring in Bochum, Ruhr-Universität | Bochum, Germany

Lab Assistant   April - June 2014

- Assisted a PhD candidate in performing research on Phase Change Slurries (PCS)