Baldwin-Akin Varner

[GitHub](https://github.com/BaldwinAkinVarner) | [LinkedIn](https://www.linkedin.com/in/baldwin-akin-varner-0065391b9) | 757-451-9747 | [akinvarner123@gmail.com](mailto:akinvarner123@gmail.com)

# EDUCATION

## Norfolk State University Norfolk, VA

*BS in Physics (GPA: 3.5) May 2022*

* Organizations/Awards: IBM-HBCU Quantum Center, The National Society of Black Physicists (NSBP)

# SKILLS

**Languages:** Java, Javascript, Python, Relational Databases & SQL, HTML, CSS, Typescript, Matlab, Mathcad

**Libraries & Frameworks:** Spring Boot, jQuery, JUnit, Angular, Node.js, Express.js, Mocha.js, Qiskit, Git/Github, AWS, React, NumPy, SciPy

# EXPERIENCE

# Wiley Edge Academy Remote

*Full Stack Developer June 2022*

* Employed MVC & object-oriented programming principles to assemble complex backend applications with thorough unit tests in Java utilizing Spring Boot, jUnit, and SQL databases.
* Implemented Spring Boot, jQuery, and RESTful services to deliver data and develop responsive web applications
* Built responsive front-end applications using tech stacks that leveraged different technologies such as HTML, CSS, Javascript, Typescript, Angular, React, and Bootstrap.

## STROBE Science & Technology Center Remote/Boulder, CO

*Python Developer June 2019 – May 2022*

* Developed a reflectometry analysis program in Python that gave insight on the dynamics of a hidden metastable phase in Tantalum diselenide using NumPy, SciPy, and Matplotlib.
* Designed software in Python using SciPy fourier transform algorithms that simulated a pump-probe spectroscopy experiment which outlined the parameters used for further experimentation.
* Collaborated with magnetics team using Agile methodology to modify Matlab programs that performed tomography on large data sets of ptychographic images.
* Collaborated with magnetics team to update and adapt Matlab programs that performed ptychography on large data sets of reflection patterns.

# Norfolk State University Norfolk, VA

*Student Researcher August 2018 – May 2022*

* Constructed nonlinear mathematical modeling programs in Mathcad that were used to determine parameters for experimentation with Two-Photon Polymerization in SU8.
* Utilized core optics concepts to construct nonlinear mathematical modeling programs in Mathcad that were used to develop a spectroscopic device that optimized nano-scale optical measurements.

## PRESENTATIONS & PAPERS

* Gentry, C.; Liao, C.-T.; You, W.; Ryan, S. A.; **Varner, B. A**.; Shi, X.; Gray, T.; Temple, D.; Raschke, M.; Rossnagel, K.; Kapteyn, H. C.; Murnane, M. M.; Cating-Subramanian, E. M., "*Super-resolved Time- Frequency Measurements of Coupled Phonon Dynamics in a 2D Quantum Material*," Submitted. 2021
* **Baldwin-Akin Varner,** Thomas Coleman, Doyle A. Temple, *“Modeling surface acoustic wave coupled surface plasmon resonance in layered structures,”* SPIE Smart Structures and Non-Destructive Evaluation Conference, Paper Number 10969-11, Denver, Colorado, March 4, 2019
* **Baldwin-Akin Varner**., Emma Cating, Margaret Murnane, “*Uncovering the hidden charge density wave phase in TaSe2*,” Leadership Alliance National Symposium, Hartford, Connecticut, July 27, 2019