

Blaine Heffron

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SUMMARY

- Recent Physics Ph.D. graduate with 5 years of research experience.
- 10 years of programming and scripting experience.
- Interests include signal processing and filtration, machine learning applications, and data analysis.
- Demonstrated initiative by developing a product for CData during downtime in a tech support role.
- Applied machine learning models for neutrino physics experiment during Ph.D..
- Self-taught web developer engaged in consulting and development work on various websites/apps.
- Currently serving as CTO of Algorhythmic Labs.

EDUCATION

2019 - 2023	PhD Physics at University of Tennessee - Knoxville	(GPA: 3.98/4.0)
2014 - 2017	MS Physics at University of Tennessee - Knoxville	(GPA: 4.0/4.0)
2008 - 2012	BS Physics at University of North Carolina - Chapel Hill	(GPA: 3.7/4.0)

WORK EXPERIENCE

Full Stack Web Developer / Technical Consulting Feb 2023 - present

- Contracting work for resolving website issues for various clients, improving site functionality and boosting SEO ranking.
- Developed a web app integrating Google Sheets with a wedding planning interface, which streamlined event management processes and received positive feedback from dozens of users.
- Lead Full Stack Developer for an educational music game for children - [Songcraft](#), helping bring in over \$40k in funding.

Graduate Research Assistant Aug 2019 - Jan 2023

- Planned and implemented experiment to determine radiation field of reactor using Ge detector, leading to significant improvement in understanding the spacial variation and sources of gamma backgrounds.
- Conducted advanced machine learning analysis to enhance neutrino signal for PROSPECT experiment, increasing effective statistics by over 3%.
- Mentored several undergraduates and graduate students, fostering their research skills and contributing to academic success.

Web Developer Contractor Jan 2017 - Sep 2020

- Designed and developed multifaceted websites and web applications for diverse clients, enhancing user experience and interaction by implementing responsive design principles and improving SEO ranking.
- Successfully maintained and updated the commercial website [wythehotel.com](#) for over 3 years, ensuring optimal performance, user engagement and consistent uptime.
- Co-developed and co-founded Staqqr, an ambitious platform for auctioning video game services. Despite its eventual closure, the experience offered substantial insights into startup dynamics and entrepreneurship while garnering great web development experience.

Technical Support Engineer at CData Software

Mar 2018 - Aug 2019

- Provided technical support that increased client satisfaction for database software services provided by CData.
- Earned promotion to lead support engineer, overseeing advanced support services for high priority clients.
- Developed a innovative product for integrating open API specified products with existing database connectivity tools.

SKILLS

Advanced Skills:

- Scientific Research
- Python
- Full Stack Web Development

Intermediate Skills:

- Public Speaking
- C++
- Data ETL
- TypeScript, Node.js, React.js, Express
- Statistical Analysis
- Physics Simulation (Geant4, MCNP)
- Radiation Detection - NaI, Ge

Beginner Skills:

- Web Scraping
- C#, Java
- Data Mining

HONORS AND AWARDS

Extraordinary Professional Promise - UT Knoxville

May 2016

Awarded for exceptional dedication and exemplary performance in proposed professional work.

Stelson Fellowship - UT Knoxville

May 2016

Received fellowship based on academic merit and excellence in research work.

Chancellor's Scholarship - UT Knoxville

2014 - 2016

Awarded this esteemed scholarship for maintaining outstanding academic record.

Robert C. Byrd Scholarship - UNC Chapel Hill

2008 - 2012

Granted scholarship that recognizes exceptional academic talent and leadership potential.