

# J DAVID SMITH

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## EDUCATION

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**Ph.D. in Computer Science** August 2015 – May 2020  
**University of Florida, Gainesville, FL**  
Advisor: Dr. My T. Thai

**Bachelor of Science in Computer Science and Mathematics** August 2011 – May 2015  
**University of Kentucky, Lexington, KY** *Summa cum laude*  
Cumulative GPA: 3.9; Major GPA: 4.00

## EXPERIENCE

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**University of Florida, Gainesville, FL** August 2015 - May 2020  
**Graduate Research Assistant**

- Conducted research at the intersection of **social network analysis**, **discrete optimization**, and **approximation theory**.
- Designed algorithms for a number of optimization tasks on network data, with a focus on information flow and structural analysis built on randomized sampling procedures.
- Implemented these algorithms in a variety of languages, including **C**, **C++**, **Java** and **Rust**.
- Designed & ran experimental evaluations of these algorithms, predominantly using **Python** with Luigi to implement the evaluation infrastructure along with a mixture of **Python** & **R** for data visualization.
- Communicated results effectively, resulting in 14 peer-reviewed conference & journal publications in top-tier venues such as ICML. *See website for publication list.*

**IBM, Littleton, MA** May – August 2015  
**Software Engineering Intern – AppScan Source**

- Designed & developed an interactive data-flow visualization for vulnerability assessment from concept to complete prototype, using AppScan Source as a data source.
- This novel visualization approach resulted in a successful patent (US Patent # US10324825B2).
- Implemented the visualization in **Node.js** using **React.js** and **D3.js**, with both interactive SVG and printable PDF outputs.

**University of Kentucky, Lexington, KY** May 2013 – May 2014, August 2014 – May 2015  
**Undergraduate Research Assistant – Computer Vision**

- Developed a web-based interface for image calibration and measuring of objects in images.
- Built in **JavaScript** using **HTML5's** Inline SVG with **Django** (a **Python** MVC framework) on the back-end.

**IBM, Research Triangle Park, NC** May – August 2014  
**ExtremeBlue Technical Intern – Traffic Management as a Service**

- Designed and built a service for IBM's *Bluemix* PaaS offering that enables users to manage & analyze traffic flowing to their application.
- Uses IBM's **DataPower** appliance as a control point to enforce traffic policies and **ElasticSearch** with **Kibana** to provide rapid feedback on policies.
- Written in **JavaScript**. Used **Node.js** for the service implementation and **AngularJS** for the user interface.
- Managed tooling and built continuous deployment pipeline using **Jenkins**.

*Last Updated: April 2020*