

# Jacob Beel

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jbeel3@gatech.edu  
(619) 721-8030

<b>OBJECTIVE</b>	Perform research and development in the realm of machine learning, particularly natural language processing.
<b>EDUCATION</b>	<p><i>Master's of Science</i>, Computer Science (Machine Learning) Georgia Institute of Technology, Atlanta, GA, expected June 2021</p> <p><i>Bachelor of Science</i>, Computer Science (Systems) University of California, Irvine, CA, June 2018 Minor: Japanese</p>
<b>COMPUTER SKILLS</b>	<p><i>Languages &amp; Software</i>: Python, C++, C, Haskell, Rust</p> <p><i>Operating Systems</i>: Windows, Unix.</p> <p><i>Other Skills</i>: Git, Subversion.</p>
<b>EXPERIENCE</b>	<p><b><i>Researcher and Software Developer</i></b> <b>June 2016 - July 2019</b> Member of Technical Staff at RAM Laboratories, San Diego, CA</p> <ul style="list-style-type: none"><li>• Researched novel uses of machine learning algorithms to analyze social media data and detect binary vulnerabilities.</li><li>• Developed and implemented vulnerability detection methods in an advanced binary analysis application designed to detect vulnerabilities automatically on ARM devices using fuzzing, concolic execution, and dynamic analysis.</li><li>• Developed a method for extracting data from unknown binary firmware and then analyzed that data using machine learning in order to detect anomalous and potentially vulnerable firmware.</li><li>• Worked closely with a team of talented individuals and customers, including proposal writing, presenting to customers, and demoing products to investors.</li></ul> <p><b><i>Data Forensics Research Intern - NREIP</i></b> <b>Summer 2015</b> Research relating to data forensics under Dr. Neil Rowe at the Naval Postgraduate School, Monterey, CA</p> <ul style="list-style-type: none"><li>• Classified hard drives and files to determine the likely use of an acquired computer</li><li>• Corrected thousands of file misclassifications to more accurately identify hard drives</li><li>• Reworked a file cataloging script to use concurrency to run several times faster</li></ul> <p><b><i>Network Security Intern</i></b> <b>Summer 2012</b> Network Security-based Software Development, SPAWAR Systems Center Pacific, San Diego, California</p> <ul style="list-style-type: none"><li>• Explored the viability of Python and PySide as tools to port existing network security tools from Unix to Windows</li></ul> <p><b><i>Web Development Intern</i></b> <b>March 2012 - April 2012</b> Proof-of-concept web development intern at SPAWAR Headquarters in San Diego, CA</p> <ul style="list-style-type: none"><li>• Developed a proof-of-concept web-based application using Java Server Pages</li></ul>

**EXTRA-  
CURRICULAR  
ACTIVITIES**

***Boy Scouts of America***

- Obtained the rank of Eagle Scout, leading several other scouts in the planning and execution of an over 100 hour community service project.