

# JOSHUA J. BAKITA

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## EDUCATION

- Master of Science in Computer Science**, *University of North Carolina at Chapel Hill* Graduating May 2019  
**Bachelor of Science in Computer Science**, *University of North Carolina at Chapel Hill* Aug. 2014 - May 2018
- **Graduated with Honors** | 3.57 Computer Science Course GPA | Fall 2016 Honors Study Abroad in London
  - **Selected Computer Science Courses:** (Grad) OS Implementations, (Grad) Warehouse Scale Computing, Digital Logic & Computer Design, Intro to Computer Security (w/ Fabian), 2D Graphics, Advanced Web Dev, Internet Services & Protocols

## TECHNICAL EXPERIENCE

- Software Engineering Intern**, *Microsoft*, Redmond, WA May. 2018 - Aug. 2018
- Implemented the background-blend-mode and mix-blend-mode CSS properties in the Edge browser and Windows (C++)
- Research Assistant**, *Dept. Computer Science - UNC Chapel Hill* Aug. 2017 - Current
- Work on the behavior and predictability of **CUDA** in safety-critical autonomous systems (such as in self-driving vehicles)
  - Published/presented papers as **first-author at OSPERT 2018** and fourth-author at **ECRTS 2018** (see my website for PDFs)
- Software Engineering Intern**, *Microsoft*, Issaquah, WA May 2017 - Aug. 2017
- Redesigned architecture for lead unsubscribe, **increasing speed 2x** for customer and protecting from **over \$3B** in fines
  - Worked in **C#** and **SQL** on enrichment and privacy management systems processing over **16 million leads** weekly
  - Upgraded, unified, and simplified logging in lead enrichment and privacy sync systems to enable business alerting
- Software Engineering Intern (TDP)**, *Capital One*, McLean, VA June 2016 - Aug. 2016
- Executed several architectural projects which **sped up deployment 10x**, startup by 2x, and testing by ~2x
  - Full stack **agile** development in **Java**, **Spring MVC**, and **AngularJS** on Apache Tomcat with some CSS and HTML
  - Worked on the free credit monitoring tool CreditWise which serves **over 11 million active users**
  - Reworked the login architecture to operate seamlessly across both development and production environments
  - Developed a graphical interface for testers to dynamically add and manage mock accounts on preproduction systems
  - Removed all proprietary libraries and reduced Java line count significantly
- Research Assistant and Coordinator**, *Dept. Computer Science - UNC Chapel Hill* June 2015 - Dec. 2015
- Led a team of undergraduates researching the use of wearable accelerometers for exercise monitoring and eldercare
  - Developed low-power embedded applications in **C** for the **Pebble and Arduino** to gather accelerometer data
  - Developed an application in **Java** for **Android** to display and offload data from the Pebble and Arduino to MATLAB
  - Open sourced the application which is already used by researchers in the Netherlands studying Parkinson's disease
- Open Source Game Developer**, *Wildfire Games*, International Team June 2013 - Aug. 2014
- Led a team to develop an online multiplayer matchmaking lobby and ranking system based on XMPP for 0 A.D. RTS
  - Worked with **C++**, **JavaScript**, and XML client-side, **Python** and **Erlang** server-side

## TECHNICAL SKILLS

**Programming Languages** (in order of proficiency): C, C++, C#, Python, Java, JavaScript, CSS, HTML, SQL, Erlang, PHP...  
**Other Relevant Skills:** Spark, Hadoop, Azure, AWS, AngularJS, Linux Kernel, .NET, Spring MVC, XMPP, ejabberd...

## OTHER EXPERIENCE

- Parliamentary Intern for James Berry MP**, *House of Commons*, London, UK Sep. 2016 - Dec 2016  
**Microsoft Student Partner**, *Microsoft Corporation*, Chapel Hill, NC Oct. 2014 - May 2016

## EXTRACURRICULARS

- President**, *UNC Computer Science Club*, Chapel Hill, NC May 2017 - Current  
**Fundraising Chair**, *HackNC*, Chapel Hill, NC Jan. 2015 - Current
- **Lead team to acquire and budget over \$50,000** for North Carolina's largest collegiate hackathon of over 700 students
- Project Manager**, *Renewable Energy Special Projects Committee*, Chapel Hill, NC Sep. 2014 - Current
- Collaborate with a committee of 15 students to **manage over \$200,000** annually for energy initiatives on campus
  - **Awarded 1st place** in the Microsoft Challenge among ~400 students at HackNC 2014 for UNC Energy Dashboard Project
- Competitor and Member**, *Association for Computing Machinery (ACM)*, Chapel Hill, NC 2015 - Current  
**Mexico Missions Trip Volunteer**, *Rancho 3M Christian School and Orphanage*, Guadalupe, Mexico 2010,11,13,15,16  
**Eagle Scout; Boy Scouts of America**, *Troop 94*, Charlotte, NC 2007 - 2014  
**Volunteer Assistant to Disabled Children**, *NCCSR*, Huntersville, NC 2012, 13