

# Aaron Beomjun Bae

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## EDUCATION

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|---|-------------------------|
| <b>University of California – Irvine</b> , Master of Science in Computer Science  | Sept. 2019 – Present    |
| <ul style="list-style-type: none"><li>• Focus on Natural Language Processing Research as a Graduate Student Researcher</li><li>• Strong ability to identify roles within a team and meeting project deadlines</li></ul>   |                         |
| <b>University of Washington</b> , Bachelor of Science in Mathematics  | Sept. 2015 – June, 2019 |
| <ul style="list-style-type: none"><li>• Member of the Sigma Nu Fraternity. Served as a Chapter Representative.</li><li>• Impacted a student organization's recruitment process by creating an automatic resume reviewer using a machine learning algorithm.</li></ul> |                         |

## EXPERIENCE

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| <b><u>Lead Data Science Researcher</u></b><br><i>UCI DataLab</i>   | March 2020 – Present    |
| <ul style="list-style-type: none"><li>• Developed a BERT-based transformer languages model that achieved 80.0 F1 score in classifying questions from a dialogue-based dataset.</li><li>• Lead a team of engineers, graduate advisors, and industry managers</li></ul>                    |                         |
| <b><u>Software Engineering Researcher</u></b><br><i>Washington Experimental Mathematics Lab</i>  | Jan. – June, 2019       |
| <ul style="list-style-type: none"><li>• Created a probabilistic model to generate statistically independent samples of possible districting of Washington state.</li><li>• Worked with a team of engineers to build a python project that is still being continued in the lab.</li></ul> |                         |
| <b><u>Website Administrator</u></b><br><i>Husky Snow Club</i>  | Oct 2017. - March, 2018 |
| <ul style="list-style-type: none"><li>• Worked as a website reliability administrator for Husky Snow club, a University student organization.</li><li>• Worked with an engineering lead who managed the project.</li></ul>   |                         |
| <b><u>Software Engineering Intern</u></b><br><i>Crowd Cow</i>  | June – Sept., 2017      |
| <ul style="list-style-type: none"><li>• Created an office dashboard that can be specifically tailored to the users (company employees') needs. Used Ruby on Rails and SQL.</li></ul>   |                         |

## PROJECTS – AVAILABLE IN GITHUB

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|---|------|
| <b><u>Image Recognition over IoT Network</u></b>  | 2020 |
| <ul style="list-style-type: none"><li>• An identification system to recognize the presence of an automobile in an intersection.</li><li>• Used AWS GreenGrass and MS Azure IoT to deploy MXNet and achieved 13ms latency on a Raspberry Pi.</li><li>• Used Docker and AWS Lambda for deployment</li></ul>   |      |
| <b><u>AnaQA: Question-Answering System</u></b>  | 2020 |
| <ul style="list-style-type: none"><li>• Combined DrQA and DecomPRC to create a new QA system for the open-domain environment.</li><li>• Used Wikipedia-crawled dataset to answer questions</li><li>• Performance was sub-state-of-the-art, but learned the fundamentals of language modeling</li><li>• Oversaw project planning and execution</li></ul> |      |
| <b><u>aaronbae.com</u></b>  | 2018 |
| <ul style="list-style-type: none"><li>• Personal website that shows my resume and showcases my full stack skills</li><li>• Includes features like blog data entry, admin management, and HTTPS security.</li><li>• A visualization feature to summarize the blog entries is in progress. Planning to use word embeddings.</li></ul>                     |      |

## SKILLS

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|--|--|
| <b><u>Data Modeling Skills</u></b>   | <b><u>Full-Stack Skills</u></b>  |
| <ul style="list-style-type: none"><li>• Python, Jupyter Notebook, PyTorch, Pandas, NLTK</li><li>• Basic familiarity with R and Tableau</li><li>• Comprehensive understanding of CNN, LSTM, Transformers, SVM, and other common models</li><li>• Extensive experience working with BERT based models like RoBERTa and XLNet</li></ul> | <ul style="list-style-type: none"><li>• <b>Core Frameworks:</b> NodeJs, React, Redux, and Express</li><li>• <b>Basic Web:</b> HTML, JavaScript, Bootstrap 4, REST</li><li>• <b>AWS Products:</b> EC2, RDS, S3, and Lambda</li><li>• <b>Database Products:</b> MongoDB, SQL, Apache Spark</li><li>• <b>Other:</b> Java, Docker, Linux, SSH, and Git</li></ul> |