Kaiser Sun

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Research Interest: Natural Language Processing

EDUCATION

- **University of Washington** — Seattle, Washington
  Master of Computer Science; — *Mar 2021 - Jun 2022*

- **University of Washington** — Seattle, Washington
  Bachelor of Science: Computer Science; GPA: 3.88 — *Aug 2018 - Mar 2021*
  Bachelor of Arts: Mathematics; GPA: 3.91
  Minor: Classical Studies;

EXPERIENCE

- **Paul G. Allen School of Computer Science & Engineering** — Seattle, WA
  Teaching Assistant — *March 2021 - present*
  - **CSEP590B: Enterprise Chatbots** Instructor: Alexandru Gavrilescu.

- **Paul G. Allen School of Computer Science & Engineering** — Seattle, WA
  Research Assistant — *March 2020 - present*
  - **A Comparison of Standard and Effective Attention (*Pytorch, transformers*)**
    - Advisor: Dr. Ana Marasović, Prof. Noah Smith.
    - Carried out a qualitative and quantitative analysis to compare the standard and effective attention(EA).
    - Showed that EA is less associated with the features related to language modeling pretraining and has more potential to illustrate linguistic features captured by the model. Work appearing in Findings of ACL2021.

- **Noonum, Inc.** — Seattle, WA
  Data Science Intern — *Nov 2020 - Mar 2021*
  - **Unmatched Noun Phrase Suggestion**
    - Used knowledge graph and representations, with the tools of *Spark* and *Spacy*, to design a pipeline of identifying novel phrases trending in news pieces.
    - Predict the relationship between this phrase and concepts existing in the graph database.
    - Avoided trending concepts being ignored in processing and gave user better suggestions of popular topics.

- **Amazon.com, Inc.** — Seattle, WA
  Software Development Engineer Intern — *June 2020 - Sept 2020*
  - **AuthPortal Onboarding Improvements**
    - Used *Javascript/HTML* based front-end, *Java Spring framework* based back-end, and serverless *AWS architecture(e.g. SQS, DynamoDB, Lambda)* to design and implement a complete authentication workflow.
    - Reduced the integration time from two hours per client to a one-click-stop, reduced 60% of storage, and enhanced the robustness of the system for hundreds of internal clients.

- **NOAA: National Oceanic & Atmospheric Administration** — Seattle, WA
  Software Engineer Intern — *June 2019 - August 2019*
  - **MUE Graphical User Interface**
    - Used *Shiny Framework* to created a graphical user interface of *Management United Estimator(MUE)* for accessing marine resources.
    - Simplified the process of identifying proper stock assessment or management units to simple click for ecologists.

SKILLS

- **Languages** Python, Java, TypeScript, SQL, JavaScript, C++, C, R, MATLAB, AIML
- **Framework** Pytorch, Apache Spark, Shiny, Spring
- **Tools** React, LaTeX, HTML, Linux(Arch, Ubuntu, CentOS), SQL Server, Microsoft Azure, AWS

HONORS

- John and JoAnne Wisniewski Endowed Scholarship in Computer Science and Engineering — Sept 2020
- Usha and S. Rao Varanasi Endowed Scholarship in SAFS and Math — Jun 2019
- Annual Dean's List — Aug 2018-Mar 2021
- Samsung Endowed Scholarship — Sept 2017

SELECTED COURSE

- **Computer Science(CSE)** Software Design; Data Structures and Parallelism; System Programming; Database Systems; Complexity(IP); Natural Language Processing; Embedded Systems; Computer Security; Deep Learning; Design and Analysis of Algorithms; Convex Optimization(IP); Machine Learning; Theory Seminar(IP); Multilingual NLP;
- **Mathematics** Scientific Computing; Linear Algebra; Differential Equations; Real Analysis; Numerical Analysis; Probability; Markov Chain and Monte-Carlo; Linear Optimization;

LEADERSHIP AND HOBBIES

- **Google Research** Computer Science Research Mentorship Program(CSRMP), Mentor: Ruoxi Wang
- **UW Disabled Resource Services** Note Taker Volunteer
- **Washington Experimental Mathematics Lab** Project on dual-random-walk and option stopping.
- **Hobbies** (16-year-student of) Painting: watercolor, sketching, oil pastel, gouache; Calligraphy; Latte Art;