Gan Xu

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Education

- **Washington University** — Saint Louis, MO
  Ph.D. Student, Computer Science — *2023(Expected)*
- **University of North Carolina at Chapel Hill** — Chapel Hill, NC
  B.Sc. Computer Science, Mathematics — *2017*

Research Experience

- **Department of Computer Science and Engineering** — Saint Louis, MO
  Graduate Research Assistant, Advisor: William Yeoh
  - **Communication-Aware DPOP** — *Feb 2019 - Now*
    Optimizing the communication between agents and speeding up resolution for Distributed Pseudotree Optimization Procedure
- **Department of Computer Science and Engineering** — Saint Louis, MO
  Rotation Student, Advisor: Jeremy Buhler, Chien-Ju Ho
  - **Online Resource Allocation Using Primal-dual Techniques** — *Nov 2018 - Dec 2018*
    The goal was to maximize the total system utility (e.g., social welfare) subject to various constraints
  - **Implementation of Minhash Sketch on Mercator** — *Oct 2018 - Nov 2018*
    Implemented a parallel algorithm to get minhash sketches with DNA sequence as input on Mercator, a framework to implement irregular streaming applications on NVIDIA GPUs
- **Carolina Center for Genome Science** — Chapel Hill, NC
  Assistant Bioinformatician, Advisor: Corbin Jones, Jeremy Wang
  - **Amplicon clustering** — *Oct 2017 - Aug 2018*
    Developed a new computational and statistical method to identify and partition clusters of unique amplicons from a complex population of full-length amplicon sequences.
  - **Grass genome assembly** — *Feb 2018 - June 2018*
    Assembled sequencing data from various species of grass

Projects

- **Anytime Reasoning and Analysis for Kill-Web Negotiation and Instantiation** — *May 2019 - Now*
  Defense Advanced Research Projects Agency. Anytime Reasoning and Analysis for Kill-Web Negotiation and Instantiation Across Domains (ARAKNID)
- **Smart Pet Feeder** — *Sep 2019 - Dec 2019*
  Design and prototype an automated pet food dispenser that can use low power wireless devices combined with Amazon Web Services (AWS) to allow easy scheduling and dispensing of pet food. The device also employs a camera to allow individual pets to be recognized and monitored by their owners when they are away, providing insight into their pets feeding habits and health

Programming Skills

- **Languages**: Python, Java, Shell, Mathematica, C/C++