Abbas Ahmed

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EDUCATION

- **University of Michigan** — Ann Arbor, MI
  Computer Science B.E., Mathematics Minor; GPA: 3.73 — *Expected Sep 2018 – May 2022*

EXPERIENCE

- **Belvedere Trading LLC** — Chicago, IL
  Incoming Software Engineering Intern — *June 2021 - Aug 2021*

- **UofM Lab of Geometry** — Ann Arbor, MI
  Researcher in Ion Channel Mesh Generation Group — *Sep 2020 - Dec 2020*
  - Wrote software package to provide researchers with easy way to generate 3D models of ion channels with given a membrane protein.
  - Modelled ion channel as a triangular surface mesh composed of millions of points and triangular faces.
  - Written in C++ to be more efficient and usable than available packages.
  - Used OOP to break down development of box mesh into modular face meshes composed of nodes and triangles.
  - Poster: *https://sites.lsa.umich.edu/logm/fall2020poster/ionchannel.*
  - Code: *https://gitlab.eecs.umich.edu/logm/fa20/ion/-/tree/dev.*
  - Paper: *https://abbasaa.dev/ionMeshReport.pdf.*

- **UofM School of Information** — Ann Arbor, MI
  Research Intern — *May 2020 - Aug 2020*
  - **GitHub Shocks Undergraduate Research Experience**: Analyzed impact of Gitter chat rooms on GitHub repositories. Chatrooms provide organized way for GitHub orgs and repo members to communicate.
  - Examined impact on productivity of repos by existence of chatrooms. Defined productivity as of stars, forks, pushes, pull requests.
  - Collected and parsed over 1TB of GitHub event data from GHArchive.org
  - Pulled over 100GB of messages data from Gitter API for over 21K rooms.
  - Applied AIC minimizing piece-wise regression algorithms on time series of GitHub events in order to see if sustained chat room use translated to increased productivity.

PROJECTS

- **Dario** — Ann Arbor, MI
  Software Developer — *April 2020 - Aug 2020*
  - Dario is the friendly calendar assistant that solves the information gap issue by intelligently using your calendar and those you're meeting with to in order to Bind the optimal meeting time.
  - Created React web app that provides Dario's web presence and the authentication flow in order to use Dario with Google Calendar.
  - Trained 4-layer ANN with dropout layers to gain deeper understanding of calendar. Input is 4 dim including month, day, start, and end. Output is 1 dim rank from 1 (preferred) to 4 (unable to attend). Used ADAM optimizer, categorical cross entropy loss, Relu activation, and checkpoint plotting callbacks.
  - Achieved 92% validation accuracy after 1000 epochs.
  - Website: https://schedulewithdario.com.

TECHNICAL

- **Languages**: C++, Python, Javascript, Go   **Technologies**: PyTorch, Tensorflow, Flask, React, Drogon, Scikit-learn

- **Courses**: Algorithms & Data Structures, Operating Systems, *Distributed Systems, *Graduate Machine Learning, *Financial Math, Theoretical Stats, Discrete Math, Linear Algebra, Computer Organization

HONORS

- **Awards**: Dean's List, University Honors, William J. Branstorm Freshman Prize, UofM Regents Scholarship