Akshay Kumar Gupta

akshaykg42@gmail.com • akshaykg42.github.io • github.com/akshaykg42

EDUCATION

The University of Texas at Austin | December 2020   **Turing Scholar**
B.S. (Honors), M.S. (Incomplete) in Computer Science | Business Minor   GPA: 3.73

Graduate Coursework: Natural Language Processing, Topics in NLP, Algorithms: Techniques & Theory, Database Systems, Cybersecurity Law & Policy, Combinatorics & Graph Theory, Programming Languages, Automated Logical Reasoning

Undergraduate Coursework: Concurrency[†], Operating Systems[†], Algorithms & Complexity[†], Data Structures & Algorithms[†], Practical Applications of NLP, AI, Neural Networks, Info Retrieval & Web Search, Competitive Programming | [†] : **Honors**

Skills: Python (+ Hugging Face, Pytorch), Go, Java, C/C++, SQL   **Interests:** NLP, Security, ML, Search, FinTech

WORK EXPERIENCE

Plaid Inc. | *Software Engineer - Security* | Remote / San Francisco   February 2021 - Present
- TBD!

Plaid Inc. | *Software Engineering Intern - Independent Data Access* | Remote, COVID   Summer 2020
- Built an interactive CLI in **Go** that allows users to securely connect to and interact with android devices on a remote cluster through API endpoints on a Controller running on the cluster, the android debug bridge (**adb**) and screen mirroring.
- Added several endpoints and new functionality to the Controller, **enabling a new use case** for it and saving hundreds of engineering hours through extensive automation.
- Wrote a **7-page technical spec** for this project before implementing it, looping in stakeholders **across teams** and incorporating feedback, accounting for **monitoring/testing/alerting/security/platform** requirements among others.

Facebook Inc. | *Software Engineering Intern - Hate Speech Engineering* | Seattle, WA   Summer 2019
- Built an end-to-end system for measuring content level hate speech prevalence on third party data to increase market intelligence, using multiple Dataswarm Pipelines in **Python** and a bot in **Hack**, making use of **Hive** and running internal NLP classifiers on third party data.

Workday Inc. | *Software Engineering Intern - Payroll Performance* | Pleasanton, CA   Summer 2018
- End-to-end automated client health report generation for executives, running analysis on client data and using Google Drive APIs to auto-generate reports in the form of presentations (using **Python**). Reduced report generation time by 98%

Visa Inc. | *Software Engineering Intern* | Austin, TX   Summer 2017
- Developed prototype to refactor visa.com architecture, reimplementing frontend using **Angular2**. Successfully reduced DOM Content load time by 50-60%.

Legitrade LLC | *Owner* | Austin, TX   August 2016 - Present
- **Profitable business** aiding recycling by finding solutions for **over 4,000 tons** of paper destined for landfills.
- I **handle all aspects** of setup, sales, documentation, accounting and taxation, and am **financially independent**!

RESEARCH AND PROJECTS

Topic Focused Extractive Summarization   2019-2020
- Built a **Topic-Focused Extractive Summarization** system that can quickly be adapted to new domains from limited data, learning "topics" and meeting users' unique information needs by providing tailored summaries for unseen documents - outperformed several baselines. Trained model by fine-tuning BERT for sentence classification using **Hugging Face**.
- Worked as an **Undergraduate Research Assistant** in UTCS under Dr. Greg Durrett, funded by Walmart Labs.

Sentiment Analysis On Songs & Tweets To Find Correlations With Major Community Events   Fall 2018
- Performed **collection, munging, and sentiment analysis** of lyric and genre data using **Python** NLP libraries.
- Worked as an **Undergraduate Research Assistant** in UTCS under Dr. Bruce Porter, funded by SparkCognition Inc.

Detecting Clickbait Hyperlinks Using Deep Learning   Spring 2018
- Used **tensorflow** to write a **BiLSTM** system that classifies hyperlinks as clickbait/non-clickbait, using pre-existing distributed word embeddings (**word2vec**) to represent word inputs.
- **Research paper** for graduate NLP class - obtained **98% accuracy, precision and recall**.

Java WebCrawler and Search Engine   November 2016
- A fully functional webcrawler and search engine in **Java**, with query-parsing, ranking and a clean UI.
- Capable of **crawling real web**, storing data in **inverted index** (9000 pages in < 10 seconds).
- **Parsed queries** with grammar into a parse-tree, retrieved pages, **ranked using tf-idf** and displayed results. Used **JUnit** and black-box testing, and ran on Wikipedia successfully.