

Tejas Kannan

☎ +1 (650) 504-9521 | ✉ tkannan@uchicago.edu | 📷 tejaskannan | 🌐 tejaskannan

Education

University of Chicago

PHD STUDENT IN COMPUTER SCIENCE, NEUBAUER SCHOLAR

RESEARCH AREAS: EMBEDDED SYSTEMS, ADAPTIVE COMPUTING, COMPUTER SECURITY, MACHINE LEARNING

Chicago, IL

September 2019 - Present

University of Cambridge

MPHIL (WITH DISTINCTION) IN ADVANCED COMPUTER SCIENCE

THESIS: "SOLVING GRAPH FLOW PROBLEMS WITH NEURAL NETWORKS: A LAGRANGIAN DUALITY APPROACH"

Cambridge, UK

September 2018 - June 2019

University of California, Berkeley

B.A. (WITH HIGH DISTINCTION) IN COMPUTER SCIENCE, GPA: 3.89/4.0

Berkeley, CA

September 2014 - May 2018

Experience

Microsoft Research

RESEARCH INTERN

Cambridge, UK

June 2019 - September 2019

- Developed techniques to improve learned representations of source code blocks using function call sites.
- Constructed a library that uses static analysis to build a function call graph between open-source projects.
- Implemented and trained neural sequence models (e.g. RNNs) in Tensorflow to create learned source code embeddings.
- Integrated the learned representations into a code search system for improved semantic information retrieval.

Uber Technologies

SOFTWARE ENGINEERING INTERN

Palo Alto, CA

June 2017 - August 2017

- Worked within Uber Maps to enhance Uber's database for both places and points of interest.
- Architected and implemented an internal web application which facilitates the detection of common chain businesses.
- Designed an Elasticsearch index, as well as a set of queries, to make business information searchable using keywords.
- Constructed a RESTful Java web server and wrote the site's frontend component in JavaScript using React and Redux Saga.

Microsoft (Skype)

SOFTWARE ENGINEERING INTERN

Palo Alto, CA

June 2016 - August 2016

- Worked with Skype People Search, a product that handles searches for Skype profiles.
- Implemented a geo-proximity searching algorithm that, when given a name and a city, returns Skype users who have the given name and are located within a defined radius of the specified city.
- Leveraged a geo-hash encoding scheme to efficiently execute geo-proximity queries on an index managed by Bing Search.
- Feature was deployed into production within the Skype desktop application in August 2016.

Microsoft (Skype)

SOFTWARE ENGINEERING INTERN

Palo Alto, CA

June 2015 - August 2015

- Worked on Skype's Registrar service, a product that handles contact information about active Skype clients.
- Replaced the service's data storage layer with a SQL Azure database to reduce latency volatility in multi-tenant cloud environments.
- Built an application to manage a horizontally scalable SQL database cluster that integrates with a multi-master geo-replication framework.

NASA Develop National Program

SUMMER INTERN

Mountain View, CA

June 2013 - August 2013

- Worked on a team of research scientists to better forecast water availability and improve resource management in California.
- Built a Python library to process geospatial datasets in ArcGIS and predict monthly river discharge through the NASA-CASA hydrological model.
- Project presented at both Ames Research Center and NASA Headquarters in Washington D.C.

Publications

- Kannan, Tejas, and Henry Hoffmann. "Budget RNNs: Multi-Capacity Neural Networks to Improve In-Sensor Inference Under Energy Budgets." 2021 IEEE 27th Real-Time and Embedded Technology and Applications Symposium (RTAS). **[Outstanding Paper, Artifact Badge]**

Skills

Proficient in Python, C, and Tensorflow; knowledge of Java, C#, JavaScript, and SQL; experience with Apache Spark, Elasticsearch, Git, Microsoft Azure, MongoDB, PyTorch, and Redis