Aravind Soundararajan

soundararaj2@wisc.edu | +16089603978 | pages.cs.wisc.edu/~aravinds | linkedin.com/in/aravind-soundararajan

Employment

Summer Research Intern	**American Family Insurance**	**May 2018 - Aug 2018**

- Developed an API that matches customer record against a million record CDH (Customer Data Hub) in minutes.
- Enhanced the capabilities of labelling service in CloudMatcher, a cloud/crowd based entity matching solution.
- Developed a customizable environment specific configuration management framework for CloudMatcher.

SDE - I, II	**Chronus**	**Jun 2014 - Jul 2017**

- Developed RESTful web services and responsive web pages as a full-stack web developer.
- Implemented scalable data migration services that synchronize 100K records into the database in minutes.
- Improved the performance of slow web pages in the Chronus application and reduced page load time by 50%.

SDE Intern	**Chronus**	**Jun 2013 - Jul 2013**

- Developed a disaster recovery procedure and documentation for the Chronus website hosted on WordPress.

Education

Madison, WI	**University of Wisconsin, Madison**	**Aug 2017 – May 2019**

- M.S in Computer Science, (Expected) May 2019. GPA: 3.932/4.0
- Graduate Research Assistant in the databases group of Prof.AnHai Doan
- Coursework: OS, AI, Machine Learning, Data Science, Advanced Databases, Distributed Systems, Big Data Systems

Chennai, India	**College of Engineering, Guindy**	**Aug 2010 – May 2014**

- B.E in Computer Science and Engineering, May 2014. GPA: 3.904/4.0
- Coursework: Data Structures, Algorithms, DBMS, OS, Computer Architecture, Language Technologies

Languages and Technologies

- **Programming Languages** Python, Ruby, Java, C, C++, SQL, Shell scripting, HTML, JavaScript, jQuery, CSS
- **Databases** SQL (MySQL, PostGres, Microsoft SQL Server), NoSQL (MongoDB, ElasticSearch)
- **Tools & Platforms** Git, Hadoop, Docker, Google Cloud
- **Web frameworks** Rails, Django

Technical Experience

Course Projects

- **Software overheads of storage in Ceph** Analysed the overheads in the software layer of Ceph distributed file storage with perf profiler using RAM disks on Google Cloud Platform. *Python*
- **Ceph fault injection** Incorporated CORDS, a filesystem fault injection framework to study the behaviour of Ceph in the presence of faults and corruptions. *Shell*
- **Learned Indices** Implemented machine learning based database indices that learn data distributions and compared against the traditional B-tree and bloom filter indices *Python*
- **Bookworms** Built a data integration pipeline for books from Goodreads and Book Depository. *Python*
- **Tweaker - Tweak the tweets** Adversarial example generator for the sentiment analysis of tweets. *Python*
- **ID3 Decision Tree, Naïve Bayes, Neural Net** Implemented ID3 decision tree, Naïve Bayes classifier, Neural Network with back-propagation for classification problems. *Python*
- **xv6 Kernel Programming** Implemented a CPU scheduler, null pointer dereference, user space memory management, stack rearrangement, thread library and a file system checker. *C*
- **N-Gram Chatbot** Implemented a chatbot that generates sentences using trigram language model trained on 250+ essays for the English language. *Java*

- **Automatic subtitling and summary generation of computer science lecture videos** Implemented the identification of word boundaries using acoustic and linguistic features from the speech. *Java*
- **Natural Language Query to SQL Query** Implemented an NLP application that assists to convert natural language queries to standard DML SQL queries. *Java*

Other Projects
- **Chronus Issue Tracker** Implemented an automatic issue creator for exceptions in production. *Ruby*
- **Natural Disaster Chatbot** Designed database backend of a chatbot that helps the victims of floods. *Python*
- **Interaction with Computer using Gesture and Motion Recognition by Value Channel Extraction** Implemented an app to track hand movement using webcam to control the desktop. *C++*

Publications
- **ICACCI 2014:** Interaction with Computer using Gesture & Motion Recognition by Value Channel Extraction.
- **ICBDM 2014:** A Hybrid Approach for Discourse Segment Detection in the Automatic Subtitle Generation of Computer Science Lecture Videos.