Mohammed Saqib

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Education

Computer Science (B. S.) | 2015-2020 | Georgia Institute of Technology

- GPA: 4.0/4.0
- **Technologies**: Java, Javascript, Python, C, D3
- Classes: Agile programming, software architecture, information security, data visualization, machine learning, object oriented design/analysis, data structures and algorithms
- Participated in GIT MAD and GT Web Dev

Biomedical Engineering (B. S.) | 2015-2020 | Georgia Institute of Technology

- GPA: 3.92/4.0
- **Technologies:** MatLab, Python, LabView, Pandas, SciPy
- Enzyme simulations, 2014 Ebola epidemic modeling, experimental data analysis, NHANES data scraping

Experience

Software Engineering Co-op | Patientco | May 2017 – Present

- **Technologies:** Golang, PHP, Javascript, Angular, Kubernetes
- Configured Kubernetes YAML files to migrate monolithic PHP server to microservices architecture
  - Deployed backend APIs with NGINX sidecar containers and created extensible pattern
- Created extensible Two Factor solution for both admin portal and health care provider portal
- Implemented cross browser testing on SauceLabs with Protractor for gopatientco.com on CI build job
- Investigated Google Pay Token decryption, created prototype Golang decryption library
- Created and updated text to pay API using Twilio callback API, SQS, and DynamoDB

MIBLAB Undergraduate Researcher | MIBLAB (Georgia Tech) | August 2017 – July 2018

- **Technologies:** Python, Pandas, Sklearn, Pytorch, Matplotlib, SQL
- Presented research findings as lead author at EMBC 2018, world's largest conference of BME scientists
- Analyzed data to predict sepsis (multiorgan failure due to infection) from MIMIC3 public Dataset
- Created a data pipeline to map chart events to high level variables, remove outliers, and fill in data
  - Collaborated with other graduate students and created replicable and open source experiments
- Used Pandas, SciPy, Matplotlib and PyTorch to categorize patients and visualize results in novel graphs
- Used Random Forest, Logistic Regression, CNN and LSTM Classifiers, extracted feature importance to corroborate with preexisting literature on sepsis
- Used multiprocessing python module and queues to parallelize data pipeline preprocessing
  - Significant speed up of data processing (95% increase in reading in and preprocessing data)
- Analyzed data from MIMIC3 Waveform Dataset and integrated high frequency waveform data

OO Design Undergraduate Teaching Assistant | Georgia Tech | January – December 2017

- **Technologies:** Java, Android
- Worked for semester project class to implement Android app through good, agile design principles
- Helped teach key software OO architecture concepts and troubleshooted technical issues
- Graded students on architecture diagrams, software demos, and essay analysis of open source projects

Notable Projects

Candy Visualization

- Used survey results of 1387 participants to create interactive dot plot, map, and histogram
- Used D3 to apply event listeners to multiple mouse inputs to update all graphs simultaneously

Tic Tac Toe Robot

- Programmed robot to play Tic Tac Toe using heuristics and naïve greedy search algorithm for AI
- Used Cozmo Python API to deal with fundamental limitations and edge cases of robot