Sameer Komoravolu

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samkomoravolu.github.io/MySite

EDUCATION

University of Illinois Urbana-Champaign — Champaign, IL
BS in Computer Science, Grainger College of Engineering (GPA: 4.0) — *Aug 2022 - May 2025*
- **Computer Science Coursework:** Discrete Structures, Data Structures, Algorithms, Computer Architecture, Operating Systems, Probability & Statistics, Machine Learning, Computer Vision, Quantum Computing
- **Math Coursework:** Number Theory, Linear and Abstract Algebra, Complex Analysis, Tensor Analysis

EXPERIENCE

Software Engineering Intern — May 2023 – Aug 2023
Chamberlain Group Inc. — *Oak Brook, IL*
- Migrated several projects in the delivery codebase into the .NET 6.0 ecosystem to ensure C# projects stay current
- Built Python script to analyze and query over 70,000 user entries and generate combined dataset for external use
- Practiced dependency injection and built integration tests to assess multiple services and bolster performance
- Worked with Azure DataFactory and CosmosDB to filter and migrate 20,000 user entries

Student Researcher — Aug 2020 – Jun 2022
Fermi National Accelerator Laboratory — *Batavia, IL*
- Filtered through signal and background events with a 98.2% efficiency with a DNN using TMVA framework
- Wrote, updated, and optimized performance of C++ CMS software packages to handle specific jobs such as tracking inventory, storing and retrieving data, and controlling other equipment in a WSL environment
- Processed over 26,000 PYTHIA-generated particle interactions by working with group's data-handling software
- Reported experimental results by publishing paper for arXiv and by presenting information at IMSAloquium

Software Engineering Intern — Jun 2020 – Aug 2020
Kridagild Inc. — *Aurora, IL*
- Designed and implemented company website interface to enable ease of use, following Object-Oriented paradigm
- Developed Python software to run the company system and minimize latency across distributed systems
- Managed a user database run on a Google Cloud Computing server to enable far-reaching access

PROJECTS

AI Development Tool | *ASP.NET, C#, Kaggle, Keras, Python, React, TensorFlow* — Jan 2023 – May 2023
- Headed small team to create site that allows users to change training parameters and generate TensorFlow code
- Site used Bootstrap form that gathers training and layer specifications to build an ANN or CNN
- Used site to train a CNN on 27,000 images and classified age, gender, and ethnicity with 89% accuracy
- Used site to train an ANN on a data set of banknotes to predict a person's class with 97% accuracy

Pattern Matching Perceptron | *C#, Git, .NET 6.0* — Nov 2022 – Jan 2023
- Built an LSTM neural net without any ML libraries to predict the next 10 numbers in a sequence of user inputs
- Developed class for supervised perceptron and gradient descent algorithm to hone in on desired set of weights
- Employed tabulation and least squares regression to predict values based on most recent inputs
- Answered correctly for standard and irregular sequences (linear, quadratic, recursive, exponential, trigonometric)

Fullstack Course Selector | *Bootstrap, CSS, HTML, Node.js, Python, TensorFlow* — Oct 2020 – Jun 2021
- Worked as a full-stack developer with a team of 6 to create a site containing information on course offerings
- Enabled student access to over 160 course syllabi by implementing a course search feature
- Provided course recommendations based on 600 students' experiences by implementing a Random Forest regressor

TECHNICAL SKILLS

Languages: Python, Java, C/C++, Assembly, Verilog, C#, SQL, HTML/CSS, JavaScript
Frameworks: React, Node.js, ASP.NET, Azure, AWS, GCP, Bootstrap, CI/CD, Scrum/Agile, WinForm
Developer Tools: Git, Docker, Visual Studio, CosmosDB, Linux, Jira, Kubernetes, DevOps, xUnit, VMWare
Libraries: Flask, NumPy, Pandas, Matplotlib, TensorFlow