Siddhartha

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Software Engineer

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CONTACT INFORMATION

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🌐 https://sidmontu.github.io   ⬤ github.com/sidmontu

INTERESTS   Machine Learning, MLOps, FPGAs, HFT, HPC, RF Communications

PROFESSIONAL SUMMARY   Experienced mid-career software engineer with a FPGA-focused research background looking for a fresh challenge. Especially interested in applied AI and ML infrastructure projects (e.g. MLOps), with/without hardware acceleration (e.g. FPGAs/ASICs) as an auxiliary goal. Referees on request.

Work Experience

Machine Learning Engineer (Contract), SAP Singapore   Jun 2021 to Present

- Building enterprise search solutions for internal stakeholders using Elasticsearch/Opensearch stacks.
- Implementing DNN-based semantic-similarity algorithms for information retrieval and ranking of results.
- MLOps tooling: setting up labeling, data cleaning, and evaluation pipelines for efficient ML iterations.
- Tools/frameworks used (non-exhaustive): [Elastic|Open]search, Docker, Poetry, Kubernetes, Kibana, Grafana, etc.

CTO/Founder, Inpact Technologies Pte Ltd (inPact.ai), Singapore   May 2020 to Sep 2021

- Led product development across all aspects of machine learning, frontend, backend, and deployment.
- Hired and managed contractors and an intern to meet product development targets regularly.
- Hands-on experience with technologies/frameworks such as ReactJS/Redux/SASS, serverless, spaCy, and more.
- Handled business functions such as customer acquisition, investor relations, fundraising, marketing, and more.
- Raised S$75K from Entrepreneur First, an international VC firm funded by some of the top investors in the world.

Posdoctoral Research Associate, University of Sydney, Australia   Oct 2017 to Dec 2019

- Research & development on a "High-Speed Machine Learning for RF Communications" project commissioned by the Australian Defense Agency, leading to a peer-reviewed publication at MILCOM 2018.
- Contribution to other FPGA-based research projects in the lab on topics such as on-chip training, logic cell architecture design, and automatic modulation classification. Total 5 research papers/posters published at peer-reviewed conferences.
- Supervision & guidance to undergraduate students on their final-year research projects.
- Sysadmin duties on available compute resources in the lab.

Education & Certifications

Nanyang Technological University (NTU), Singapore   Jan 2013 to Feb 2019

PhD, Computer Science & Engineering, Advisor: Nachiket Kapre
Dissertation: Dataflow Optimized Overlays for FPGAs
Teaching Assitant: Programmable System on Chip (CE4054), Embedded Software Development (CE4052)

Imperial College London, United Kingdom   Oct 2009 to Jun 2012

BEng, Electrical & Electronics Engineering, 2nd Upper Class Honors

Machine Learning Engineering for Production (MLOps) Specialization, DeepLearning.AI   Ongoing

4-module specialization offered through the Coursera MOOC platform. Focuses on best in-industry practices for deploying data-centric machine learning systems. Instructors include Andrew Ng (founder DeepLearning.AI and Coursera), Robert Crowe (Tensorflow Developer Engineer, Google), Laurence Moroney (Lead AI Advocate, Google), and more.

Data Science Specialization, John Hopkins University   Mar 2015 to Apr 2016

10-module specialization that covers concepts and tools essential for building effective data science pipelines. Capstone project on building a text-prediction R web-app, similar to the predictive text technology found in mobile phones today.