

# JASSIM ABDUL GAFOOR

## PROJECTS

- Chip Layout 45nm architecture** | *Cadence, SystemVerilog* Dec 2020
- Synthesized a Finite State Machine module to control a user-driven lighting system
  - Created CMOS layout of my integrated circuit using Cadence Virtuoso toolkit
  - Performed simulations and analysed waveforms to meet timing requirements
- Bragg interferometer** | *KLayout, Lumerical Interconnect, MATLAB, Python* Jan 2020
- Created Transfer Matrix Model in MATLAB to generate design parameters for Bragg grating and Fabry-Perot cavity
  - Optimized sizing of Fabry-Perot cavity by 50% to increase quality factor of optical laser by running simulations in Lumerical Interconnect
  - Designed layout in KLayout to fabricate my design in silicon foundry
  - Tested laser design in lab using optical apparatus which achieved 0.75 quality factor
- MEMS Gyroscope Project** | *AutoDesk Inventor, Solidworks, Clewin* Dec 2018
- Designed a Micro-Electro-Mechanical Systems Gyroscope with CAD 0.2mmx0.2mm
  - Generated mask layouts in Clewin for fabrication with SOI-MUMPS process
  - Modelled energy and information flow diagrams for gyroscope to improve reliability
  - Minimized cross talk to less than 5% between driving and sensing oscillations
- 3- Input NAND** | *Cadence Virtuoso* Dec 2020
- Created layout of 3-Input NAND in Cadence Virtuoso
  - Minimized layout footprint by using diffusion-sharing for pull-up network
  - Used stick diagrams and Euler algorithm to find optimum layout for NAND

## WORK EXPERIENCE

- TELUS Vancouver** Jul 2019 - Apr 2020
- Co-op Student** | *HTML/CSS, Confluence, Jira*
- Planned migration of 3000 SharePoint documents to new Confluence platform
  - Created templates and checklists for process, transferred 50% more documents per day and trained team members to follow the standardised procedure
  - Translated user needs into technical requirements for building Confluence tools
  - Performed software validation of all developed tools and search functionality
  - Pushed project timeline forward by repurposing \$10,000 software and transferred 9000 catalogue items slated for future migration

## EDUCATION

- UNIVERSITY OF BRITISH COLUMBIA** Expected Graduation Apr 2021
- Bachelor of Applied Science** | *Integrated Engineering*
- Focus on Microelectromechanical systems, Semiconductor lasers, Digital VLSI systems.
  - Major in Electrical Engineering, Minor in Computer Engineering
  - Safety Officer at UBC Thunderbikes design team
  - Landing Gear Sub-team at UBC Aerodesign team
  - Marketing Executive at UBC Enlivening Paper Inventions Club

## MOBILE

+1 (236) 868 - 4445

## EMAIL

jgafooruni@gmail.com

## LINKEDIN

/in/jassimga4/

## WEBSITE

jassimgafoor.github.io

## SOFTWARE

- Intel Quartus
- Cadence
- Adobe Photoshop
- MATLAB
- SolidWorks
- KLayout
- Ansys Lumerical
- Modelsim

## PROGRAMMING

- Python
- C++
- SystemVerilog HDL
- Assembly
- HTML/CSS

## HARDWARE

- Altera FPGA
- Raspberry Pi
- Arduino
- Decawave UWB

## INTERESTS

Electronics hobbyist who builds computers and servers. Avid sports enthusiast who plays volleyball and badminton.