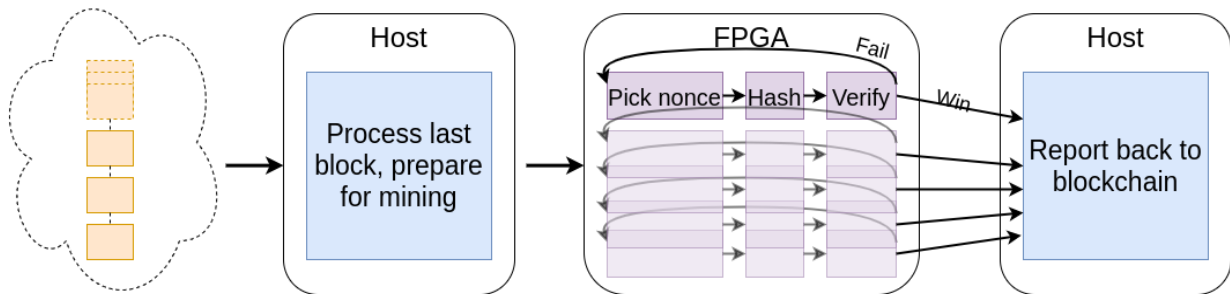


XACC Bitcoin Miner, Jonatan Langlet – Alireza Sanaee, Queen Mary University of London

<https://github.com/sarsanaee/xacc-bitcoin-mining>

- ▶ Summary of what you did
 - Plan – Bitcoin Miner
 - Final project – Very primitive Bitcoin Miner which computes a couple of hashes successfully.
- ▶ What did you learn, or what was interesting/difficult?
 - Getting the project to the point that we could do the actual programming was the most difficult part.



▶ Results, Image?

```
ap_uint<32> input_data = 0; //should be 640bit (80byte) total to hash

hls::stream<ap_uint<32>> msg_strm; //in
hls::stream<ap_uint<64>> len_strm; //in
hls::stream<bool> end_len_strm; //in
hls::stream<ap_uint<256>> hash_strm; //out
hls::stream<bool> end_hash_strm; //out

printf("\n inserting hash input \n");
end_len_strm.write(false);
msg_strm.write(input_data);
len_strm.write(4); //640 bit, 80 byte (64 = 2x32)

end_len_strm.write(true);

printf("\n calculating hash \n");
xf::security::sha256<32>(msg_strm, len_strm, end_len_strm, hash_strm, end_hash_strm);
```