**Entry Level Software Engineers**

The following is a list of both required and ideal experience for individuals that want to work in entry level software engineer positions in emerging tech fields like Blockchain and AI.

**Required Experience**

- Background in computer science, artificial intelligence, applied mathematics or equivalent areas.
- Familiarity with the blockchain industry at large.
- Ability to speak intelligently about distributed ledger technology (DLT), Hyperledger, and crypto assets such as Bitcoin and Ethereum.
- Ability to conceptualize and develop relevant use cases or proofs-of-concept using DLT.
- Ability to write smart contracts in at least one DLT environment.

**Ideal Experience**

- Familiarity with hardware integration such as Raspberry Pi.
- Programming experience JavaScript, Solidity, Java, C++, Angular, and Node.

**Four-Year Track**

Though not all potential employers require applicants to have four-year degrees, those that do will most likely prefer their applicants be either:

- Interns enrolled and studying towards a bachelor’s degree in Computer Science, Computer Engineering, Mathematics, or a related area.
- Current software engineers holding one of the above degrees.

**Developers**

The following is a list of required programming experience for individuals that want to work in various developer positions.

<table>
<thead>
<tr>
<th>Developer Positions</th>
<th>Required Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backend</td>
<td>NodeJS, MongoDB, Mongoose</td>
</tr>
<tr>
<td>Frontend</td>
<td>JavaScript, TypeScript, Angular 6+, React</td>
</tr>
<tr>
<td>Testing</td>
<td>Jest or Jasmine</td>
</tr>
<tr>
<td>Mobile</td>
<td>Java, Swift, or React Native</td>
</tr>
<tr>
<td>Blockchain</td>
<td>JavaScript, TypeScript, Solidity</td>
</tr>
<tr>
<td>Executable Distributed Code Contract</td>
<td>Solidity, Web3, Ganache, Go-Ethereum, Truffle</td>
</tr>
<tr>
<td>(Smart Contract) Development</td>
<td></td>
</tr>
<tr>
<td>Continuous Integration and Code</td>
<td>Jenkins, Docker, AWS (EC2, S3, CloudFront)</td>
</tr>
<tr>
<td>Deployment (CI/CD)</td>
<td></td>
</tr>
<tr>
<td>General Tech Skills &amp; Knowledge</td>
<td>HTML &amp; CSS (not programming languages but foundational to putting content on a web page), Object Oriented programming, CSS Preprocessors (SCSS or LESS), Responsive Design</td>
</tr>
</tbody>
</table>
Requirements for All Positions
The following is a list of soft skills that individuals in any position should possess.

Soft Skills

- Attention to detail.
- Strong verbal and written communications skills.
  - Being able to translate complex concepts into simple terms (e.g., explaining technical concepts to non-technical clients/customers).
- Strong analytical and quantitative abilities.
  - Able to clearly define problems and solutions, then compare solutions to choose the best in a given context.
- Ability to form and articulate coherent viewpoints based on data.
  - Approaches research with curiosity and an open mind.
  - Able to aggregate and compare information from multiple sources.
- Problem-solving skills.
  - Able to identify challenges/problems and then plan, execute, re-assess, and report results.
- Self-driven
  - Takes responsibility for starting projects and seeing them through to completion.
  - Knows when to use resources and when to ask for help.
  - Needs minimal supervision.
  - Self-taught learner.
  - Independent but comes prepared with questions and willingness to collaborate.
- Fascinated with futuristic technologies, not just blockchain tech.