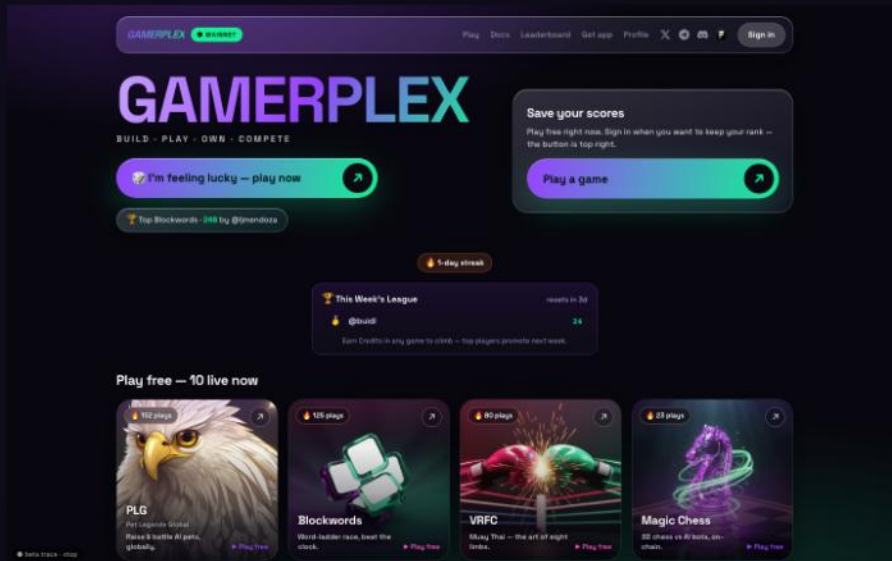


Getting started as a smart contract developer



John Forfar

Developer Relations · AI, Web3 & Gaming

Founder, Gamerplex · live on Solana mainnet

Jose Maria College · Davao

Somebody wrote every wallet, game and token you've ever used

Blockchain development is a software-engineering job.
Today isn't about becoming one in 90 minutes. It's about
leaving with the map.

Same app. **Different place** for the rules.

WEB2 · WHAT YOU BUILD IN CLASS

User → Website

Website → Backend

Backend → Database

The owner can change any record

WEB3 · A DAPP

User → Frontend

Frontend → **Wallet** (you sign)

Wallet → **Smart contract** → Blockchain

Nobody can quietly change the record

A smart contract is **code + rules + state**

- 01 **Code** deployed to a blockchain, run by the network — not by you
- 02 **Rules** that apply to everyone, including the person who wrote it
- 03 **State** everyone can read: votes, balances, scores, certificates

Learn it **free**: 12 projects in 5 hours

The official Solana Developer Bootcamp 2026. We'll tour it at high level now. You do it at home.

[YOUTUBE.COM/@SOLANAFNDN](https://youtube.com/@solanaFNDN)

5H 12M

FREE · REFERENCE CODE FOR EVERY PROJECT

02

Your **homework**, if you want it



youtube.com/watch?v=2pcm7ICRJ KU

Solana Developer Bootcamp 2026 · official · free · 12 projects

Project 01–02: from **empty laptop** to running app

```
# Project 01 · install Rust, Solana CLI, Anchor, Surfpool (one script)
$ solana --version && anchor --version

# Project 02 · Hello World: a full-stack starter, pre-wired
$ npx create-solana-dapp@latest
✓ Next.js + Anchor template · wallet connect · program on devnet
$ npm run dev # → localhost:3000

# free test money on devnet – never real money while learning
$ solana airdrop 2 --url devnet
```

► Project 01 at 8:18 · Project 02 at 16:25

One **vote**, two ecosystems

ETHEREUM · SOLIDITY

```
contract Voting {
    mapping(string => uint256) public votes;

    function vote(string calldata name) public {
        votes[name] += 1;
    }
}
```

SOLANA · RUST + ANCHOR (BOOTCAMP)

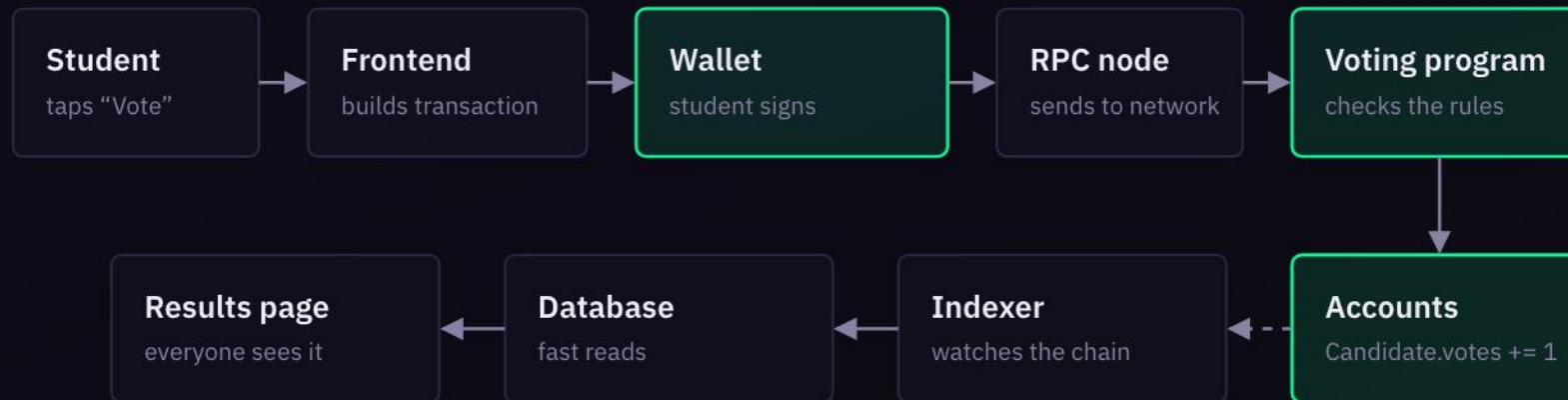
```
#[account]
pub struct CandidateAccount {
    pub name: String,
    pub votes: u64,
}

pub fn vote(ctx: Context<Vote>) -> Result<()> {
    ctx.accounts.candidate.votes += 1;
    Ok(())
}
```

What happens when you tap “Vote”

OFF-CHAIN · YOUR WEB SKILLS

ON-CHAIN



Highlighted = the new parts. Everything else is web development you already know.

Bonus Lesson 02 · Indexing at 4:13:01 · Project 11 · full-stack Prediction Market at 4:16:07

The ladder: **one new idea** per project

04

Escrow

Two strangers swap tokens; the program holds funds until both sides deliver

[▶ 1:20:45](#)

06

Stablecoin

Digital dollars with compliance controls: freeze, recover, restrict

[▶ 2:51:33](#)

07

Stable Swap

An exchange where the price comes from maths, not a broker

[▶ 3:07:32](#)

08

x402

Pay a fraction of a cent per web request, inside plain HTTP

[▶ 3:33:47](#)

09

Real-World Assets

Collectibles and physical goods as tokens

[▶ 3:47:34](#)

11

Prediction Market

Full stack: program + Next.js + wallet, end to end

[▶ 4:16:07](#)

How professionals ship a contract

- 01 **Build & test locally** — the voting project ships with 8 automated tests
- 02 **Deploy to devnet** — fake money, real network, show your friends
- 03 **Review, then mainnet** — audit, deploy, then monitor it like a server

In blockchain, a bug isn't a crash. **It's a withdrawal.**

- 01 **Never trust what's passed in** — check who owns it and who signed it
- 02 **Check your maths** — one overflow can mint money from nothing
- 03 **Guard the keys** — the admin key belongs in a multisig, not one laptop

What a **real** contract looks like

3,018

LINES OF RUST

One file, `lib.rs` — the Gamerplex arcade contract, open source

24

INSTRUCTIONS

Things the world can call: pay, save score, open session, admin...

4.7

SOL LOCKED AS RENT

Just to keep 677 KB of program on mainnet

My first version believed “I paid”

The contract took the amount as a number you typed in — and never checked that any money actually moved.

Anyone could claim a leaderboard spot for free. My own audit caught it before launch.

Now it **checks**. Five times.

GAMERPLEX-ARCADE · RECORD_PAYMENT · SIMPLIFIED EXCERPT

```
pub fn record_payment(ctx: Context<RecordPayment>, amount_micro_usd: u64, /* ... */) -> Result<()> {  
    // 1. Emergency brake: the admin can pause all payments  
    require!(!ctx.accounts.payments_config.paused, ArcadeError::PaymentsPaused);  
    // 2. Called directly by the player's transaction, not smuggled in by another program  
    require!(get_stack_height() == TRANSACTION_LEVEL_STACK_HEIGHT, ArcadeError::CpiNotAllowed);  
    // 3. Exactly one payment per transaction – one transfer can't pay twice  
    require!(rp_count == 1, ArcadeError::DuplicateIxInTx);  
    // 4. The right price for what you're buying  
    require!(amount_micro_usd == required, ArcadeError::InvalidScoreCommitAmount);  
    // 5. Look inside the transaction: did the tokens REALLY move to the treasury?  
    verify_spl_transfer_for_mint_in_tx(&sysvar, &mint, decimals, &treasury, &player, amount)?;  
}
```

github.com/gamerplex/gamerplex-arcade · `programs/gamerplex-arcade/src/lib.rs`

**You're still responsible for
the code that AI writes.
You still have your name
on it when you commit.**

From student to hired

Nobody hires you for watching a course. They hire you for what you shipped.

[BOOTCAMP](#)[HACKATHON](#)[PORTFOLIO](#)[APPLY](#)

03

Four steps. Each one **proves** the last.

1

Bootcamp

Learn the stack. Finish a project, don't just watch it.

2

Hackathon

Build something real in weeks, with a deadline and judges.

3

GitHub portfolio

Public code, a README, tests passing, a devnet link.

4

Apply

Bounties, job boards, and a message with a link to what you built.

Hackathons: the real job interview

\$250K

PRE-SEED PER ACCELERATOR TEAM

Colosseum's accelerator, for top
hackathon winners

\$10K

UNIVERSITY AWARD

Best university team, Solana Frontier,
spring 2026

~10K

BUILDERS COMPETING RIGHT NOW

Online, free to enter, from anywhere —
including Davao

I didn't win. I shipped anyway.

I wrote up Colosseum's winners on my blog for two years. Then I entered two hackathons with Gamerplex — and didn't make the list.

The games went live on Solana mainnet anyway. That's the part that counts.

A GitHub that **gets you hired**

- 01 **Five projects that climb** — vote → token → student certificate → treasury → full app
- 02 **Every repo proves itself** — README, screenshot, devnet link, tests passing
- 03 **Commits over months** — steady green squares beat one big upload

Where the **jobs** **and paid work** are

- 01 **Superteam Earn** — paid bounties: get paid while you build the portfolio
- 02 **jobs.solana.com · web3.career** — real listings, many remote
- 03 **Your message** — one line, one link to something you deployed

Pick the door that matches what you already like

01 Frontend → **Web3 frontend** · Backend → **integration / indexer engineer**

02 Cybersecurity → **auditor** · Networks & theory → **protocol / core engineer**

03 Ops → **infrastructure** · Teaching & writing → **developer relations** (me)

Your **first 90 days**

- 01 **Month 1** — JavaScript/TypeScript, Git, one web app · bootcamp Projects 01–02
- 02 **Month 2** — wallets, transactions, your first contract · Projects 03–04
- 03 **Month 3** — frontend + wallet + contract on devnet, on GitHub · then enter a hackathon

You don't need to learn everything in Web3 before you begin. Become a strong developer, learn one ecosystem well, build progressively — and treat security as part of the job.

Scan before you leave



Free bootcamp

youtube · 2pcm7ICRJKU



Hackathons

colosseum.com



Paid bounties

superteam.fun/earn



Play my games

gamerplex.com