

L28: Lab – NFT Valuation

Module C: NFTs & Digital Assets

Blockchain & Cryptocurrency Course

December 2025

By the end of this lab, you will be able to:

- Apply a comprehensive due diligence framework to NFT projects
- Identify critical red flags and scam indicators
- Conduct systematic rarity analysis and trait valuation
- Prepare professional investment recommendation reports
- Synthesize all Module C concepts into practical evaluation

Final Capstone Lab: Comprehensive NFT project evaluation

Activities:

- 1 Due diligence checklist development
- 2 Multi-dimensional project analysis
- 3 Red flag identification and risk scoring
- 4 Comparative collection analysis
- 5 Investment recommendation report

Deliverable: 5-page investment memo on selected NFT collection

Skills Applied:

- NFT technology assessment (L21-22)
- Marketplace analysis (L23-24)
- Category-specific valuation (L25-27)

8-Pillar Evaluation Model:

- 1 Technology & Infrastructure (L21-22)
- 2 Marketplace Presence & Liquidity (L23-24)
- 3 Community & Social Signals (L25)
- 4 Team & Governance
- 5 Utility & Roadmap
- 6 Rarity & Distribution
- 7 Financial Metrics
- 8 Legal & Regulatory Compliance (L27)

Scoring: Each pillar scored 0-10, total score out of 80

Key Questions:

- Is the smart contract verified on Etherscan?
- Does it use standard ERC-721 or ERC-1155 (or custom)?
- Is metadata stored on IPFS, Arweave, or centralized server?
- Is the `tokenURI` immutable or mutable?
- Are images pinned with reputable service?
- Are there any smart contract security audits?
- Is the contract ownership renounced?

Scoring (0-10):

- 10: Verified, standard, IPFS/Arweave, immutable, audited, renounced
- 5: Verified, custom contract, IPFS, some mutability
- 0: Unverified or HTTP metadata or active admin control

Key Metrics:

- Floor price (ETH) and stability over 30 days
- 7-day trading volume (ETH)
- Number of unique buyers in past 30 days
- Percentage of collection listed for sale
- Average sale price vs. floor price (premium analysis)
- Presence on multiple marketplaces (OpenSea, Blur, etc.)
- Wash trading indicators (volume vs. unique traders)

Scoring (0-10):

- 10: ≥10% listed, daily sales, ≥100 unique buyers/month, multi-platform
- 5: 5-10% listed, weekly sales, 20-100 buyers/month
- 0: ≤2% listed, ≤5 sales/month, ≤10 buyers (illiquid)

Evaluation Criteria:

- Twitter followers and engagement rate
- Discord members and daily active users
- Reddit/Telegram community presence
- Organic vs. bot followers (check engagement ratio)
- Influencer and celebrity holders
- Community sentiment (bullish, neutral, bearish)
- Recent communication frequency (active vs. silent)

Scoring (0-10):

- 10: ≥50k Twitter, ≥10k Discord, daily updates, high engagement
- 5: 10-50k Twitter, 2-10k Discord, weekly updates
- 0: <5k Twitter, inactive Discord, no recent updates (dead community)

Key Questions:

- Is the team doxxed (real identities public)?
- What is the team's track record (prior projects)?
- Is there a DAO or governance structure?
- What percentage of supply does the team hold?
- Have there been any controversies or rug pulls?
- Are advisors or investors credible (VCs, known figures)?

Scoring (0-10):

- 10: Fully doxxed, proven track record, >10% team holdings, DAO
- 5: Pseudonymous but credible, 10-20% team holdings
- 0: Anonymous, no track record, >30% team holdings (rug risk)

Utility Categories:

- **IP Rights:** Commercial usage rights (BAYC model)
- **Ecosystem Access:** Token-gated content, events, products
- **Governance:** Voting on project decisions
- **Yield:** Staking rewards or passive income
- **Metaverse:** Integration with virtual worlds
- **Gaming:** Playable characters or in-game items

Roadmap Execution:

- Have past milestones been delivered on time?
- Are future goals realistic and specific?
- Is the roadmap vague or overpromising?

Scoring (0-10):

- 10: Multiple utility streams, strong roadmap execution
- 5: Some utility, mixed execution
- 0: No utility beyond speculation, failed roadmap

Rarity Analysis:

- Use rarity.tools or similar to rank NFTs
- Identify rarest traits (top 5% frequency)
- Check if rarity premium exists (rare items sell for higher multiples)
- Analyze trait distribution (balanced vs. skewed)

Holder Distribution:

- Unique holders / Total supply ratio (target $\geq 60\%$)
- Top 10 holders ownership percentage (target $\leq 20\%$)
- Whale concentration (any holder with $\geq 10\%$?)
- Team and founder holdings

Scoring (0-10):

- 10: Clear rarity structure, $\geq 70\%$ holder ratio, no whales
- 5: Moderate rarity, 50-70% holder ratio
- 0: No rarity premium, $\leq 40\%$ holder ratio (concentrated)

Key Calculations:

- 1 **Market Cap:** Floor Price * Total Supply
- 2 **Volume/MCap Ratio:** 30d Volume / Market Cap (liquidity)
- 3 **Mint vs. Floor:** Floor price relative to original mint
- 4 **ATH Distance:** Current floor vs. all-time high
- 5 **Holder ROI:** Average holder return (current floor vs. avg buy)

Example:

- Floor: 2 ETH, Supply: 10,000 = Market Cap 20,000 ETH
- 30d Volume: 1,000 ETH / 20,000 ETH = 5% (moderate liquidity)
- Mint: 0.08 ETH, Floor: 2 ETH = 25x return (strong)

Scoring (0-10):

- 10: High liquidity, strong mint ROI, near ATH
- 5: Moderate liquidity, breakeven mint ROI
- 0: Illiquid, below mint price (underwater holders)

Key Questions:

- Are IP rights clearly defined in legal terms?
- Does the project have Terms of Service?
- Is there a legal entity (DAO LLC, foundation)?
- Are there potential securities law issues (Howey Test)?
- Does the project face regulatory scrutiny?
- Are there trademark or copyright disputes?

Scoring (0-10):

- 10: Clear IP rights, legal entity, compliant, no disputes
- 5: Some legal clarity, no major issues
- 0: Vague IP, no legal structure, securities risk, ongoing lawsuits

Critical Red Flags (Automatic Disqualification):

- ❶ **Unverified contract:** Cannot audit code
- ❷ **HTTP metadata:** Centralized, loss risk
- ❸ **Team holds $\geq 50\%$:** Dump risk
- ❹ **No community activity:** Dead project
- ❺ **Zero sales in 30 days:** Illiquid
- ❻ **Suspected rug pull history:** Team scammed before

Warning Flags (Reduce Score):

- Mutable tokenURI (metadata can change)
- High team holdings (20-50%)
- Failed roadmap milestones
- Wash trading indicators
- Celebrity pump without substance

Rule: 2+ critical red flags = DO NOT INVEST

Activity 1: Select NFT Collection

Task: Choose a collection for comprehensive analysis

Selection Criteria:

- Floor price ≥ 0.5 ETH (serious project)
- Total supply $\leq 1,000$ items (scalable)
- 30-day volume ≥ 10 ETH (some liquidity)
- Active social media (recent posts within 7 days)

Recommended Categories:

- PFP collections (e.g., Azuki, Doodles, Clone X)
- Generative art (e.g., Art Blocks projects)
- Gaming NFTs (e.g., Parallel, Gods Unchained)
- 1/1 art collection (e.g., artist series on SuperRare)

Avoid: Collections with obvious red flags (for learning purposes, analyze real candidates)

Activity 2: Data Collection

Task: Gather all necessary data for 8-pillar analysis

Data Sources:

- **OpenSea:** Floor, volume, holders, listings
- **Etherscan:** Contract verification, metadata URI, transactions
- **rarity.tools:** Rarity rankings and trait distribution
- **Twitter/Discord:** Community size and engagement
- **Project website:** Roadmap, team, utility
- **Nansen/Dune:** Whale holdings, wash trading analysis

Create Data Sheet:

- Spreadsheet with all metrics per pillar
- Screenshots of key evidence (contract, metadata, charts)

Activity 3: Pillar-by-Pillar Scoring

Task: Score each of the 8 pillars (0-10)

Scoring Process:

- 1 Review collected data for Pillar 1 (Technology)
- 2 Compare against scoring criteria (slide 4)
- 3 Assign score 0-10 with justification
- 4 Repeat for all 8 pillars
- 5 Calculate total score (out of 80)

Interpretation:

- 70-80: Excellent project, strong buy candidate
- 55-69: Solid project, acceptable risk
- 40-54: High risk, speculative
- <40: Avoid, too many weaknesses

Activity 4: Comparative Analysis

Task: Compare your selected collection to 2 competitors

Steps:

- 1 Identify 2 similar collections (same category, similar floor)
- 2 Score both competitors using same 8-pillar framework
- 3 Create comparison table with all scores
- 4 Analyze relative strengths and weaknesses
- 5 Determine which offers best value proposition

Example Comparison:

- Your collection: 62/80 (floor 2 ETH)
- Competitor A: 58/80 (floor 2.5 ETH) – Overvalued
- Competitor B: 67/80 (floor 1.8 ETH) – Undervalued

Conclusion: Competitor B may be better value

Activity 5: Risk Assessment

Task: Identify and quantify all risks

Risk Categories:

- 1 **Technology Risk:** Smart contract bugs, metadata loss
- 2 **Market Risk:** Liquidity dries up, floor price crashes
- 3 **Team Risk:** Abandonment, rug pull, mismanagement
- 4 **Regulatory Risk:** Securities classification, IP disputes
- 5 **Competition Risk:** Better projects emerge, market share loss

Risk Matrix:

- High Probability + High Impact = Critical Risk
- High Probability + Low Impact = Monitor
- Low Probability + High Impact = Contingency Plan
- Low Probability + Low Impact = Accept

Activity 6: Investment Thesis Development

Task: Articulate clear bull and bear cases

Bull Case (Why Buy):

- Strengths from 8-pillar analysis
- Undervalued relative to competitors
- Strong roadmap execution potential
- Growing community and ecosystem
- Catalysts (upcoming launches, partnerships)

Bear Case (Why Avoid):

- Weaknesses from 8-pillar analysis
- Overvalued relative to fundamentals
- Market saturation in category
- Regulatory uncertainty
- Critical dependencies (team, platform)

Balanced Thesis: Weight both cases, determine net conviction

Activity 7: Investment Recommendation

Task: Provide final recommendation with rationale

Recommendation Types:

- ① **Strong Buy:** Score 70+, undervalued, low risk
- ② **Buy:** Score 55-69, fair value, acceptable risk
- ③ **Hold:** Score 40-54, fair value, monitoring needed
- ④ **Sell/Avoid:** Score \leq 40 or critical red flags

Investment Parameters:

- Recommended position size (e.g., 1-5% of portfolio)
- Target entry price (floor or below)
- Stop-loss (e.g., 30% below entry)
- Time horizon (short-term flip vs. long-term hold)
- Exit strategy (take profit at X% gain or milestones)

5-Page Investment Memo Format:

Page 1: Executive Summary

- Collection name, category, floor price
- Overall score (X/80) and recommendation
- 3-sentence investment thesis

Page 2-3: 8-Pillar Analysis

- Score and justification for each pillar
- Key data points and evidence

Page 4: Comparative Analysis & Risk Assessment

- Comparison table with competitors
- Risk matrix with mitigation strategies

Page 5: Investment Recommendation

- Bull/bear cases, final recommendation, parameters

Collection: Azuki (10,000 anime PFPs)

Quick 8-Pillar Scores:

- 1 Technology: 9/10 (verified, IPFS, immutable)
- 2 Marketplace: 8/10 (2.5 ETH floor, daily volume 50+ ETH)
- 3 Community: 7/10 (300k Twitter, 100k Discord, active)
- 4 Team: 5/10 (pseudonymous, controversy over Elementals launch)
- 5 Utility: 6/10 (IP rights, anime brand, mixed roadmap)
- 6 Rarity: 8/10 (clear rarity, 75% holder ratio)
- 7 Financial: 7/10 (2.5 ETH floor vs. 1 ETH mint, moderate liquidity)
- 8 Legal: 7/10 (clear IP, no major disputes)

Total: 57/80 – HOLD/BUY (acceptable risk, fair value)

Analytical Errors:

- 1 **Overweighting hype:** Celebrity endorsements \neq fundamentals
- 2 **Ignoring liquidity:** High floor but no buyers = trap
- 3 **Recency bias:** Recent pump does not mean sustainable growth
- 4 **Confirmation bias:** Seeking data that supports pre-existing opinion
- 5 **Anchoring:** Fixating on ATH or mint price (irrelevant)
- 6 **FOMO:** Buying at peak hype without analysis

Best Practices:

- Base analysis on objective data, not emotions
- Validate social metrics (bots vs. real engagement)
- Always check smart contract and metadata
- Compare to fundamentals, not just price action

Blockchain Data Analysis:

Using Dune Analytics:

- Unique minters vs. current holders (turnover rate)
- Average holding period (diamond hands vs. flippers)
- Transfer patterns (wash trading detection)
- Whale accumulation or distribution

Using Nansen:

- Smart Money labels (which wallets are buying?)
- Token God Mode (track specific NFT history)
- NFT Paradise (collection-level analytics)

Key Insight: On-chain data reveals true investor behavior (not just social hype)

- ➊ Comprehensive NFT evaluation requires 8-pillar framework (technology, liquidity, community, team, utility, rarity, financials, legal)
- ➋ Critical red flags (unverified contract, HTTP metadata, team dump risk) disqualify projects
- ➌ Comparative analysis reveals relative value vs. competitors
- ➍ Risk assessment must balance probability and impact across categories
- ➎ Investment recommendations require clear bull/bear thesis and parameters
- ➏ On-chain metrics validate or contradict social hype signals

Deliverable: 5-page investment memo on selected NFT collection

Requirements:

- 1 Executive summary with overall score and recommendation
- 2 Detailed 8-pillar analysis with evidence
- 3 Comparative analysis with 2 competitors
- 4 Risk assessment matrix
- 5 Investment recommendation with parameters
- 6 All data sources cited, screenshots included

Grading Criteria:

- Data accuracy and completeness (30%)
- Analytical rigor and objectivity (30%)
- Investment thesis clarity (20%)
- Report professionalism (20%)

- ❶ Which pillar in the 8-pillar framework is most important for long-term value?
- ❷ Can NFT projects with low scores still succeed through community strength alone?
- ❸ How should investors balance quantitative metrics vs. qualitative judgment?
- ❹ What role does personal risk tolerance play in NFT investment decisions?
- ❺ How can the framework be adapted for different NFT categories (art, gaming, RWA)?

Module C: NFTs & Digital Assets – Complete

Topics Covered:

- NFT technology deep dive (ERC-721, metadata, IPFS)
- Marketplaces and trading dynamics (OpenSea, Blur, royalties)
- Digital art and collectibles (1/1, generative, PFPs)
- Gaming NFTs and metaverse (P2E, virtual land)
- Real-world asset tokenization (RWA, securities, BlackRock)
- Practical valuation and due diligence frameworks

Skills Developed:

- Technical NFT analysis (smart contracts, storage)
- Market analysis (floor price, volume, liquidity)
- Community and team evaluation
- Systematic investment decision-making