E-ZPass Fraud Detection System - Final Presentation Template

New Jersey Courts - NJIT Capstone Project

Target Score: 150/150 (Excellent)

📊 15-Slide Structure (18 minutes max)

Slide 1: Title + Problem Hook

- Project title + NJ Courts branding
- The challenge (manual review, limited detection)
- Our impact (stats: alerts found, money saved)
- Team names + logos

Slide 2: Problem Deep Dive

- Current state (40% detection rate, manual CSV review)
- 3 fraud types (toll evasion, card skimming, account takeover)
- Business impact (revenue loss, investigation backlog)
- Data source (3,213 March 2025 transactions analyzed)

Slide 3: Solution Architecture

- Vision statement ("reactive to proactive using AI")
- Flow diagram (CSV → Risk Algorithm → Dashboard)
- Tech stack (React, Chart.js, Node.js, Azure)
- Key features (real-time, 12 rules, 0-100 scoring)

Slide 4: AI Risk Algorithm

- Risk score formula (amount 30%, frequency 25%, etc.)
- Key detection rules (>$100 amounts, impossible travel, off-hours)
- Classification thresholds (0-30 clean, 71-100 high risk)
- Agency-specific logic (PANYNJ, NJTP, GSP, SJ, DRJTBC)

Slide 5: Dashboard Design

- Dashboard view (3 KPI cards, charts, recent alerts)
- Data table (10 columns, status dropdowns, search/filter)
- Design principles (teal branding, dark theme, accessibility)
- Screenshots comparison

Slide 6: [LIVE DEMO - Dashboard]

- Screen share application
- Show statistics (1,428 alerts, $76,330 prevented)
- Navigate recent alerts → data table
- Highlight processing speed (<5 sec), accuracy (92%)

Slide 7: [LIVE DEMO - Workflow]

- Filter by status, search transactions
- Change status (Flagged → Investigating → Resolved)
- Show color changes (amber → red → green)
- Demonstrate no scrolling, mobile-friendly

Slide 8: Business Impact & ROI

- Performance metrics table (92% detection, 3.2 sec processing)
- Time savings (15hrs → 4hrs/week, 73% reduction)
- Cost analysis
- Business benefits (proactive, data-driven, audit trail)

Slide 9: Technical Implementation

- Scalability (20K current → 500K+ capacity)
- Security (HTTPS, data retention, accessibility)
- Development (8 sprints, 50+ commits, agile)
- Quality (98.5% parsing success, zero corruption)

Slide 10: Innovation Highlights

- **Technical innovations:** Real-time scoring, agency-specific rules
- **Business innovations:** Cost-effective, rapid deployment, zero training
- **Competitive advantage:** First NJ-specific platform
- **AI integration ready:** Azure OpenAI framework

Slide 11: Validation & Testing

- Real data (3,213 transactions, 92% accuracy)
- User experience (intuitive, mobile, color-coded)
- Performance testing (large files, browser compatibility)
- User feedback quotes

Slide 12: Future Roadmap

- **Phase 2:** Email integration, Azure OpenAI, user auth
- **Phase 3:** Predictive analytics, mobile app, ML training
- **Strategic vision:** Expand agencies, other courts, licensing

Slide 13: Lessons Learned

- **Technical learnings:** Table layout, React patterns, Chart.js

- **Design learnings:** User feedback, color coding, layouts
- **Project management:** Iterative development, documentation
- **Personal growth:** Domain expertise, client skills

Slide 14: Next Steps & Recommendations

- **Immediate actions:** Azure deployment, user testing, monitoring
- **Short-term:** Email integration, auth, training materials
- **Strategic recommendations:** Pilot program, ROI measurement
- Team availability for full-time roles

Slide 15: Thank You & Q&A

- Project summary (5 key achievements with checkmarks)
- Team achievements (2 months, agile, real-world testing)
- Thank you section
- Employment interest + contact info
- Questions & discussion

🎯 Timing & Rubric Focus

- **Timing:** 1-1.5 min per slide + 2.5 min each for demos = **18 minutes total**
- **Rubric Focus:**
  - **Problem:** Slides 1-2 (clear, detailed with data)
  - **Sources:** Slide 2 (E-ZPass data) + Slide 15 (acknowledgments)
  - **Solution:** Slides 5-7 (easy to understand + live demo)
  - **Vision:** Slides 3-4, 10 (innovative, elegant)
  - **Implementation:** Slides 8-9 (feasible, well-considered)
  - **Engagement:** Live demos + professional delivery
  - **Organization:** Clear flow, consistent format

📋 Timing Breakdown (15 Slides = 15-18 Minutes)

Slide	Time	Notes
1	1 min	Quick hook with impact numbers
2	2 min	Detailed problem (most important)
3	1.5 min	Architecture overview
4	2 min	Algorithm details (technical depth)

5	1.5 min	UI design showcase
6	2.5 min	Live demo - dashboard
7	2.5 min	Live demo - workflow
8	2 min	Business impact & ROI
9	1.5 min	Technical implementation
10	1 min	Innovation highlights
11	1 min	Validation & testing
12	1 min	Future roadmap
13	1 min	Lessons learned
14	1.5 min	Recommendations
15	0.5 min	Thank you
Q&A	2-5 min	Remaining time