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| Nestfinder | | | | |
|  |  | | |  |
| FS2 - React | | | | |
|  | | React Module |  | |

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# Introduction

NestFinder is a revolutionary web-based platform powered by AI that promises to transform the property search experience for both buyers and renters. By leveraging cutting-edge algorithms and a user-friendly interface, NestFinder aims to efficiently match individuals with their ideal homes, saving them time, effort, and stress throughout the housing market journey. This document serves as the cornerstone of NestFinder's technical development, outlining the essential components, functionalities, and implementation roadmap for bringing this innovative platform to life.

The document is primarily targeted towards developers, architects, and technical stakeholders involved in building and launching NestFinder. It provides a comprehensive overview of the project, encompassing its architecture, database design, APIs, AI integration, and key implementation stages. This document aims to guide the development team, ensuring clarity, coherence, and efficient collaboration throughout the project's lifecycle.

Beyond serving as a technical roadmap, this document also fosters transparency and communication with other stakeholders, including investors, product managers, and even future users. By articulating the underlying technology and architecture, this document lays the foundation for building a robust, scalable, and user-centric platform that revolutionizes the online property search landscape.

With thorough planning, efficient implementation, and continuous improvement, NestFinder has the potential to become the gold standard for property search, empowering individuals to navigate the housing market with confidence and ease.

This introductory section sets the stage for the detailed technical information that follows, highlighting the importance of this document while establishing its intended audience and broader impact. Feel free to customize and expand upon this intro to further reflect the specific context and objectives of your NestFinder project.

# Technology Stack

* Programming Language: C#
* Web Framework: ASP.NET Core (lightweight, cross-platform, and performant)
* Database: SQL Server (reliable, feature-rich relational database)
* Cloud Platform: Azure (for scalability and infrastructure needs)
* Frontend Framework: React (for dynamic and interactive user interfaces)
* AI and Machine Learning: ML.NET (open-source framework for .NET developers)
* Additional Tools:
  + Elasticsearch/Solr (for search functionality)
  + Twilio (for communication features)
  + Stripe or PayPal (for payment integration)

# Market Analysis

This analysis dives deep into the potential of NestFinder in the Australian and Indian property

Australia:

Demographics: 67% of internet users access online property search platforms. Millennials and Gen Z are the largest demographics, with over 70% using online platforms.

Property Trends: Median house price: $981,770. Rental vacancy rate: 1.4%. Growing demand for sustainable and smart homes.

Online Search Habits: Google dominates search engine use with 95% market share. Mobile device usage for property search exceeds 75%.

Technology Adoption: High smartphone penetration (95%) and internet access (92%).

## Online Property Market Analysis and Research: Australia vs. India

**Australian Property Market:**

* **Current Trends:** The Australian property market has experienced moderate growth in 2023, with house prices rising by about 3.5% nationally. However, there are significant variations across regions, with some cities like Sydney and Melbourne witnessing a slight decline, while others like Brisbane and Perth remain buoyant.
* **Key drivers:** Strong economic growth, low interest rates, and population increase are major drivers of the market. However, affordability concerns and government measures to cool down the market are also playing a role.
* **Future Demand:** Forecasts suggest continued moderate growth in the coming years, with regional variations persisting. The affordability issue might dampen demand in major cities, while smaller cities and regional areas could see stronger growth.

**Indian Property Market:**

* **Current Trends:** The Indian property market witnessed a revival in 2023 after facing headwinds in previous years. Increased housing affordability due to lower interest rates, government infrastructure initiatives, and a growing urban middle class are fueling demand.

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# Operating Plan

# Marketing and Sales Plan

# Financial Plan

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| START-UP COSTS | | | | |
| Your Office-Based Agency | January 1, 20xx | | | |
| COST ITEMS | MONTHS | COST/ MONTH | ONE-TIME COST | TOTAL COST |
| Advertising/Marketing | 3 | $300 | $2,000 | $2,900 |
| Employee Salaries\* | 4 | $500 | $2 | $2,002 |
| Employee Payroll Taxes and Benefits | 4 | $100 | $1,500 | $1,600 |
| Rent/Lease Payments/Utilities | 4 | $750 | $2,500 | $5,500 |
| Postage/Shipping | 1 | $25 | $25 | $50 |
| Communication/Telephone | 4 | $70 | $280 | $560 |
| Computer Equipment |  | $0 | $1,500 | $1,500 |
| Computer Software |  | $0 | $300 | $300 |
| Insurance |  | $0 | $60 | $60 |
| Interest Expense |  | $0 | $0 | $0 |
| Bank Service Charges |  | $0 | $0 | $0 |
| Supplies |  | $0 | $0 | $0 |
| Travel & Entertainment |  | $0 | $0 | $0 |
| Equipment |  | $0 | $2,500 | $2,500 |
| Furniture & Fixtures |  | $0 | $0 | $0 |
| Leasehold Improvements |  | $0 | $0 | $0 |
| Security Deposit(s) |  | $0 | $0 | $0 |
| Business Licenses/Permits/Fees |  | $0 | $5,000 | $5,000 |
| Professional Services - Legal, Accounting |  | $0 | $1,500 | $1,500 |
| Consultant(s) |  | $0 | $0 | $0 |
| Inventory |  | $0 | $0 | $0 |
| Cash-On-Hand (Working Capital) |  | $0 | $1,000 | $1,000 |
| Miscellaneous |  | $0 | $2,000 | $2,000 |
| ESTIMATED START-UP BUDGET |  |  |  | $26,472 |
| \*Based on part-time employees. This may change once you hit your growth benchmark. | | | | |

**Projected profit and loss model:** The model below shows a sample of the projections a small business is forecasting for their first 12 months of operations. The top portion of the table shows projected sales and gross profit. This is a good place to begin creating the company’s sales forecast. The next section itemizes the recurring expenses the business is projecting for the same months. These should be consistent with the estimated start-up costs completed in the prior section. At the bottom of this model, it will possible to see when the company is becoming profitable and what expense items are the most impactful to its profitability. There is a blank table in the Appendix to complete the business’ own start-up cost projections.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| START-UP COSTS | | | | | | | | | | | | | | |
| Your Office-Based Agency | | | | | | | January 1, 20xx | | | | | | | |
| REVENUE | JAN | FEB | MAR | APR | MAY | JUN | | JUL | AUG | SEP | OCT | NOV | DEC | YTD |
| Estimated Sales | $5,000 | $13,000 | $16,000 | $7,000 | $14,500 | $16,400 | | $22,500 | $23,125 | $24,549 | $22,000 | $25,000 | $27,349 | $216,423 |
| Less Sales Returns & Discounts | $0 | ($350) | $0 | ($206) | ($234) | $0 | | $0 | ($280) | ($1,200) | ($1,600) | $0 | ($2,400) | ($6,270) |
| Service Revenue | $0 | $0 | $0 | $0 | $0 | $250 | | $350 | $100 | $0 | $0 | $1,245 | $1,360 | $3,305 |
| Other Revenue | $0 | $0 | $0 | $0 | $0 | $0 | | $0 | $1,500 | $0 | $0 | $0 | $0 | $1,500 |
| Net Sales | $5,000 | $12,650 | $16,000 | $6,794 | $14,266 | $16,650 | | $22,850 | $24,445 | $23,349 | $20,400 | $26,245 | $26,309 | $214,958 |
| Cost of Goods Sold\* | $2,000 | $5,200 | $6,400 | $2,800 | $5,800 | $6,560 | | $9,000 | $9,250 | $9,820 | $8,800 | $10,000 | $10,940 | $86,569 |
| Gross Profit | $3,000 | $7,450 | $9,600 | $3,994 | $8,466 | $10,090 | | $13,850 | $15,195 | $13,529 | $11,600 | $16,245 | $15,369 | $128,389 |
| EXPENSES | JAN | FEB | MAR | APR | MAY | JUN | | JUL | AUG | SEP | OCT | NOV | DEC | YTD |
| Salaries & Wages | $2,500 | $2,500 | $3,500 | $5,000 | $5,000 | $5,000 | | $8,000 | $9,000 | $9,000 | $9,000 | $9,000 | $9,000 | $76,500 |
| Marketing/Advertising | $400 | $450 | $450 | $450 | $900 | $900 | | $900 | $900 | $900 | $900 | $1,200 | $1,200 | $9,550 |
| Sales Commissions | $250 | $650 | $800 | $350 | $725 | $820 | | $1,125 | $1,156 | $1,227 | $1,100 | $1,250 | $1,367 | $10,821 |
| Rent | $1,250 | $1,250 | $1,250 | $1,250 | $1,250 | $1,250 | | $1,250 | $1,250 | $1,250 | $1,250 | $1,250 | $1,250 | $15,000 |
| Utilities | $250 | $150 | $200 | $200 | $200 | $250 | | $250 | $250 | $200 | $200 | $250 | $250 | $2,650 |
| Website Expenses | $175 | $175 | $175 | $175 | $175 | $175 | | $175 | $175 | $175 | $175 | $225 | $225 | $2,200 |
| Internet/Phone | $110 | $110 | $110 | $110 | $110 | $110 | | $110 | $110 | $110 | $110 | $110 | $110 | $1,320 |
| Insurance | $165 | $165 | $165 | $165 | $165 | $165 | | $165 | $165 | $165 | $165 | $165 | $165 | $1,980 |
| Travel | $100 | $0 | $0 | $250 | $0 | $0 | | $0 | $0 | $675 | $800 | $0 | $0 | $1,825 |
| Legal/Accounting | $1,200 | $0 | $0 | $450 | $0 | $500 | | $0 | $0 | $0 | $0 | $0 | $250 | $2,400 |
| Office Supplies | $125 | $125 | $125 | $125 | $125 | $125 | | $125 | $125 | $125 | $125 | $125 | $125 | $1,500 |
| Interest Expense | $0 | $0 | $0 | $0 | $0 | $0 | | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Total Expenses | $6,525 | $5,575 | $6,775 | $8,525 | $8,650 | $9,295 | | $12,100 | $13,131 | $13,827 | $13,825 | $13,575 | $13,942 | $125,746 |
| Income Before Taxes | ($3,525) | $1,875 | $2,825 | ($4,531) | ($184) | $795 | | $1,750 | $2,064 | ($298) | ($2,225) | $2,670 | $1,427 | $2,643 |
| Income Tax Expense | ($529) | $281 | $424 | ($680) | ($28) | $119 | | $263 | $310 | ($45) | ($334) | $401 | $214 | $396 |
| NET INCOME | ($2,996) | $1,594 | $2,401 | ($3,851) | ($156) | $676 | | $1,488 | $1,754 | ($253) | ($1,891) | $2,270 | $1,213 | $2,246 |
| \*In the service industry, Cost of Goods Sold is the monetized value of the time spent on the client. | | | | | | | | | | | | | | |

# Appendix

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| START-UP COSTS | | | | |
| Your Office-Based Agency | | January 1, 20xx | | |
| COST ITEMS | MONTHS | COST/ MONTH | ONE-TIME COST | TOTAL COST |
| Advertising/Marketing |  |  |  |  |
| Employee Salaries |  |  |  |  |
| Employee Payroll Taxes and Benefits |  |  |  |  |
| Rent/Lease Payments/Utilities |  |  |  |  |
| Postage/Shipping |  |  |  |  |
| Communication/Telephone |  |  |  |  |
| Computer Equipment |  |  |  |  |
| Computer Software |  |  |  |  |
| Insurance |  |  |  |  |
| Interest Expense |  |  |  |  |
| Bank Service Charges |  |  |  |  |
| Supplies |  |  |  |  |
| Travel & Entertainment |  |  |  |  |
| Equipment |  |  |  |  |
| Furniture & Fixtures |  |  |  |  |
| Leasehold Improvements |  |  |  |  |
| Security Deposit(s) |  |  |  |  |
| Business Licenses/Permits/Fees |  |  |  |  |
| Professional Services - Legal, Accounting |  |  |  |  |
| Consultant(s) |  |  |  |  |
| Inventory |  |  |  |  |
| Cash-On-Hand (Working Capital) |  |  |  |  |
| Miscellaneous |  |  |  |  |
| ESTIMATED START-UP BUDGET |  |  |  |  |

## Instructions for Getting Started with Estimated Start-Up Costs

Determining a business' startup costs is critical to ensure enough cash is available to begin business operations within the budgeted time frame as well as within the cost budget. Startup costs typically fall within two categories: monthly costs and one-time costs. Monthly costs cover costs that occur each month during the startup period, and one-time costs are costs that will be incurred once during the startup period.

Steps for preparation:

* Step 1: Enter the company name and the date this estimate is being prepared.
* Step 2: Enter the number of months and the monthly cost for each cost item that is recurring. For one-time costs only, skip the monthly costs. If there are cost items that have both recurring and one-time amounts, enter those as well. The total cost will calculate automatically in the far-right column.
* Step 3: Once all of the costs are entered, review the individual items and total amount to see where the budget can be fine-tuned or move something out into the future when more revenue is coming in.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| START-UP COSTS | | | | | | | | | | | | | | |
| Your Office-Based Agency | | | | | | | | January 1, 20xx | | | | | | |
| REVENUE | JAN | FEB | MAR | APR | MAY | JUN | JUL | | AUG | SEP | OCT | NOV | DEC | YTD |
| Estimated Product Sales |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Less Sales Returns & Discounts |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Service Revenue |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Other Revenue |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Net Sales |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Cost of Goods Sold |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Gross Profit |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| EXPENSES | JAN | FEB | MAR | APR | MAY | JUN | JUL | | AUG | SEP | OCT | NOV | DEC | YTD |
| Salaries & Wages |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Marketing/Advertising |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Sales Commissions |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Rent |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Utilities |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Website Expenses |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Internet/Phone |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Insurance |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Travel |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Legal/Accounting |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Office Supplies |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Interest Expense |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Other 1 |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Total Expenses |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Income Before Taxes |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| Income Tax Expense |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| NET INCOME |  |  |  |  |  |  |  | |  |  |  |  |  |  |
| \* In the service industry, Cost of Goods Sold is the monetized value of the time spent on the client. | | | | | | | | | | | | | | |

## Instructions for Getting Started on Profit & Loss Projections

Completing projections for Profit and Loss of a new company is a good exercise to understand and communicate when the company will begin to break even and see how sales and profits will grow. The top portion of the model to the left, Revenue, is a good way to forecast sales, month by month for the first year. The lower portion then applies estimated expenses for the same period of time to derive the business' profitability.

Steps for preparation:

* **Step 1:** Enter the company name and the date this projection is being prepared.
* **Step 2:** For each month, beginning in January or whenever the start is estimated, enter the expected sales to be. This could be for a single service or multiple services. Add lines to this model for additional offerings. From this, subtract any product returns or discounts that are to be tracked (these should be shown as negative numbers, for example, -10). Below Net Sales, enter the Cost of Goods Sold. This refers to the monetized value of the time spent on a particular client.
* **Step 3:** For each month, enter the estimated salaries, marketing, utilities, and other items that are projected.
* **Step 4:** Once all of the costs have been entered, review the individual items and total amount to see where projections can be fine-tuned or move something out into the future when more revenue is coming in. The objective is to get to profitability and positive cash flow as quickly as possible.